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Amiga
CBM 64/128
Spectrum
Amstrad
IBM + more

ISSUE TWELVE • SEPTEMBER 1988 • £1.50

ACE

ADVANCED • COMPUTER • ENTERTAINMENT

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ISSUE**

THE
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JOIN IT.

**CAN SPACE-AGE TECHNOLOGY
LAUNCH THE ULTIMATE GAME?**

GLOBAL CONFLICT

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**WATCHING
THE
DETECTIVES**

PSST! DON'T MISS OUR
WHO-DUNNITS FEATURE
ON PAGE A *A G H G H G H G H G H!*

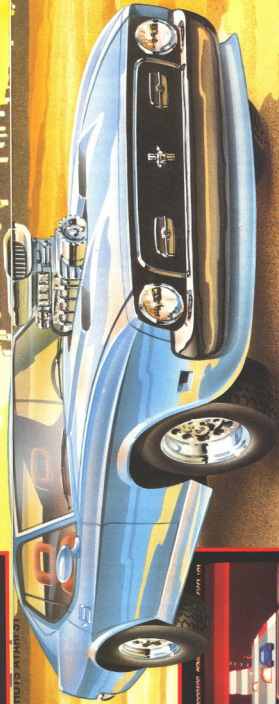


THIS MONTH'S GAMES FACE

THE FINAL JUDGEMENT



FLIGHT SIMULATOR III AIRBORNE...BOUNCE BALLS WITH THE MONSTERS IN HELTER SKELTER...ROADBLASTERS VS FIRE AND FORGET. WHO WINS?



**AVAILABLE ON ATARI ST: £19.99
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In the old days it was just a **private matter** between you and the Galaxians, but now advances in digital communications and gameplay mean you can **take on the world**. ACE checks out high-tech multi-player games, and wonders how long it is before satellite communications put us in touch with some **real aliens**...



Digital communications could spread games around the world

77 Watching The Detectives

Your heart's in your mouth, your pistol's in your hand, and there's fifteen games waiting in the wings, each with a **tales to tell** and a **mystery to solve**. ACE reviews on their **dirty macs** and stick their noses into **detect-em-ups**.

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Nigel Brownjohn - designer of Verminator. Could you do it too?

Did you know that some people spend their lives playing games - and **get paid for it**? In the first part of a major series, ACE reveals all about the **intricate process** of games design, production, and publishing. Experts in their field talk about their work and give you some **hot tips** on how to get started.

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Three new software houses think they've got it made. What have they got to offer?

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of a major series, ACE reveals all about the **intricate process** of games design, production, and publishing. Experts in their field talk about their work and give you some **hot tips** on how to get started. Three new software houses think they've got it

ACE

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PC-compatible Spectrum shock horror!

An MSDOS Spectrum?? Amstrad must be joking - but who gets the **last laugh**?...Two Twin Twits got all excited about matters diabolical...Activision and the **Incredible Shrinking Sphere**...Mimorsot work up a new image. If it's **going on**, this is where it **goes in**...

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ACE tears down the barriers between today's pages and tomorrow's games.

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MSDOS Spectrum, checks out **Deluxe Paint II** on the **of Big Blue**.

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Britain's top reviewers take to the skies with **Flight Sim III** - and bring down a few turkeys while they're up there...Plus - solve the traffic problem with a spot of high

explosive in **Roadblasters** (or should that be **Fire and Forget**?); **Helter Skelter** - bouncing ball games meet **Bubble Bobble**; and the President's brain is missing, as well as the rest of his body.



Page 60: Giganoid - should this game be illegal?



Page 42: Flight Sim III - the definitive flying program in a new incarnation.

26 Arcade Ace

This month's entry for the **Most Ridiculous Scenario** of 1988 is **Tootbir**, in which **Bif and Jet**, the **Tubular Dudes**, paddle down the river in old tyres and chuck tin cans at fishermen. If that's too much for you, check out the follow-up to **Darius**, plus **Fighting Soccer** from SNK.

85 Tricks 'n' Tactics

The **ACE Cheat Factory** takes the impossible out of **Impossible Mission 2**, steers you out of a spin in **Spindizzy**, gives Amstrad owners a **monster poke** for **ATF**, and lays out the **lie of the land** in **Race Against Time**.

72 Adventures

Is **Wasteland** the **best computer RPG** yet? Should you get **stuck into MicroUD**? The **Pilgrim** column bursts at the seams with news, tips, and the **latest staff-busters**.

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12 The Ace Card

You can't get something for nothing, right? Wrong. We don't charge you a penny for an ACE card with your very own ID number on it, and then every month we fall over ourselves dishing out £££s worth of prizes. Don't ask us why, just go for it!

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An all expenses paid weekend in Gay Paree to attend the Festival De Micro in October. Sounds too good to be true? Find out on page 14...

94 Special Offers

Save yourself a walk to the shops, and save yourself up to £4 off a single game. Gamesplayers never had it so good...

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Just imagine...the convenience of a subscription, the assurance of regular delivery, and a bundle of US Gold blockbusters at half-price. Now you're talking...

ACE PINK PAGES

100 Software Buyers' Guide

Puzzle games, brain games, and a few unique titles that fall into a class of their own make up this month's selection of ACE Recommended Software. We've checked 'em out - now you can just go out and buy with confidence.

106 Upgrade Guide

Authoritative technical details enable you to choose the right machine when you want to buy or upgrade.

108 Random Access

These pages get more and more...er...unusual. This month the puzzles are joined by a host of tid-bits and other ACE miscellany.

115 Readers' Pages

The experts offer help in the ACE Helpline, the lonely hearts cry out for pen pals, the capitalists sell hardware, the computerless beg for it, and even a couple of user clubs join in the hue and cry of ACE's open market. Fill in the form provided and open a stall of your own.

THE ACE CARD

Win an Atari ST!

Turn to page 12 for details of your chance to win the Atari ST we're giving away - and check The Blitter End to see if you've won an Amiga or any of the staggering 24 software prizes we offered last month.

HELLO AND GOODBYE...

You may not realise it, but the issue you now clutch to your breast as you step out of the newsagent and the chauffeur opens the door of your Rolls-Royce and...

Back to reality. The issue you are now reading, marvelling at the state-of-the-art features, reviews, and special offers, is a milestone issue in the history of ACE magazine.

First, it marks the arrival of two consultant editors, each with special responsibility for bringing you the best of graphics and music coverage. Brian Larkman launches his first graphics 'magazine-within-a-magazine' on page 21, and Mark Jenkins sounds off with three pages of red hot MIDI and music coverage on page 96.

Second, it marks the arrival of the infamous Bob Wade - one of the country's leading experts on computer games. Bob was on the original team at Personal Computer Games before going to work on Amstrad Action, which he later edited himself. His arrival means even more authoritative assessment of the games we play.

Finally, it marks the departure of launch editor Pete Connor. Uncle Pete's joined the Foreign Legion and is currently stationed in London. He will be sending regular despatches to the magazine on a free-lance basis, so despite his departure we'll still be able to enjoy his unique brand of humour in future issues.

All of which goes to show that we're still committed - as always - to constantly improving the magazine. It's been hard work, but the support you've given us has been overwhelming and made us the best-selling new computer title around. To all of you, from all of us - old, new, past and present - a very big thank you.

THE ACE TEAM

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BARBARIAN II

THE DUNGEON OF DRAX



Spectrum Version



Amiga Version



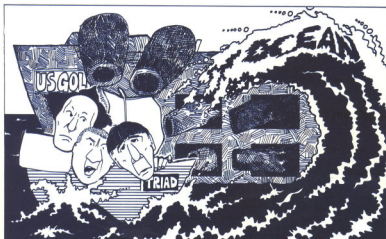
C64 Version



Check your local stockist for availability.
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disk), £19.99 (Amiga) plus 80p P&P. Access
and Visa holders telephone 01-278 0751.
Subject to availability.



The Three Stooges go to sea...

GIANTS GET TOGETHER

Telecomsoft, Mirrorsoft, and Psygnosis have stunned the games community with a shock announcement that they are to join forces and create a common label, Triad.

A dramatic press release was fax'd to members of the industry with a joint statement signed by all three companies, declaring that:

'Our common conviction in the future of the 16-bit market place has brought the three companies together, in what we are sure is just the first of a number of joint-ventures. We are all of the belief that with all three of us working together we will be able to offer new opportunities to both the industry and its consumers.'

Sean Brennan of Telecomsoft confirmed that the three companies would be collaborating on titles for the ST and Amiga and added that they might also be looking at the PC format. 'We'll be more oriented towards the games side to start with, but there are certainly possibilities raised by new technology that we will be looking into in future.' He added that multi-player games were one such possibility.

At the time of going to press Jonathan Ellis of Psygnosis confirmed that the group was ready to announce project number one, but further details would not be available 'for some weeks'.

US Gold took the announce-

ment of a potential new competitor with quiet confidence in their ability to triumph over all. Speaking for the company, Richard Tidwell remarked that any such venture '...could only narrow the choice for games players. They'll be bringing out one product where previously they could have brought out three.' Other reactions were chiefly of the 'too many cooks' variety - understandable when three major parties, normally competitors, get

together.

In the past, the three companies have brought us such classics as *Carrier Command*, *Dungeon Master*, and *Barbarian*. However, it remains to be seen whether talent shared is talent tripled. Doubtless the *Three Stooges* - anti-heroes of one of Mirrorsoft's recent releases - would have something to say on the matter.

SPECTRUM GOES PC-COMPATIBLE?!

Yup, it's Amstrad rumour time again - but this time the rumours appear to be substantiated by one of the company's directors and have a firm basis in truth.

According to Computer Trade Weekly, a Spanish magazine has printed details of four new Amstrad products that include an MS-DOS games machine. This supports earlier rumours in the industry that Amstrad were planning a PC-compatible micro that would be sold without a monitor for connection to a domestic colour TV. The computer would carry the Sinclair/Spectrum logo and retail for around £299.

The system would allow users to gain PC-compatibility and access to a vast amount of American PC

games software. It's doubtful whether a TV display would be well-suited to business applications, so it seems reasonable to expect the machine to be bought primarily for entertainment. Although much of the American software is of dubious quality, there has been an enormous improvement in recent months, with excellent conversions including PHM Pegasus, *Flight Simulator III* (see this issue), and *Incentive's Driller*.

What really matters, however, is what graphics standard the new machine would operate under. EGA graphics are becoming more and more desirable and many new state-of-the-art games require an

EGA capability. However, it seems unlikely that such a standard would feature on a budget machine.

Amstrad have already released one series of home micros with an industry-standard operating system

- the CPC computers all have the option of running under CP/M. If the company do go ahead and introduce the new machine, software houses will almost certainly go for PC games in a big

way - the attraction of a UK home market as well as over a million business users and vast numbers of PCs in America would be impossible to resist. The PC could become one of the biggest games machines out there yet...



PC - Flight Simulator III

A C E • N E W S

ADVANCED COMPUTER ENTERTAINMENT

THE TWITS RIDE OUT

You've heard of Dennis Wheatley, of course. Yes you have – he was the man who wrote over 80 novels in the first half of this century, most of them thrillers, and many dealing with black magic. *The Devil Rides Out* (filmed starring Christopher Lee) and *To The Devil A Daughter* were two of his best-known works.

Domark, it seems, are planning some devilish masterpieces of their own. It's all happening because Arch-twit Dominic Wheatley is the great Dennis's grandson, and the company that holds the rights to his books has recently been taken over by the enterprising Twits. They plan to revamp the image of the books and then, perhaps, launch a series of computer games that follow the 'Left Hand Path', as the black magical career-ladder is sometimes known as.

Domark are certainly riding out in style. In a feverish burst of activity, the company are launching all sorts of extraordinary ventures. Twin Twit Mark Strachan revealed to ACE that – amongst other projects – Christopher Lee wants to do a new film of *The Devil Rides Out*, there's a musical being considered in *Phantom of The Opera* style, Stirling Moss has recorded some in-car cassettes for them – and that's all without mentioning their main business of producing games.

'Software', murmurs Mark, tracing a pentacle on the desk with his fingers, 'is and will continue to be our main business, but we do want to pursue...er...', he gazes to the Heavens, 'other business.' You can almost hear the cheers on the Astral Plane. Down here on Earth,



Christopher Lee and his companions shelter from the forces of evil in *The Devil Rides Out*. Lee's indicated to Domark that he'd be very keen to do a remake of the film, particularly since – at 60 years old – he now feels he's the 'right age' for the part. With modern film-making techniques, it could certainly be quite a blockbuster. Let's hope that it comes off – and that we get the game as well.

however, we probably take more interest in a new *Trivial Pursuit* game and this autumn's big Star Wars release, *The Return of The Jedi*.

'We wanted to do a new version of *Trivial Pursuit* – a proper computer version rather than a board-game conversion. We spoke to the manufacturers and they were delighted. So there are not only new questions in the new game, but also a solar system packed with planets which you visit to pick up various trivial objects. Great fun – and programmed by ODE (Oxford Digital Enterprises) who did the original.'

Return of The Jedi is a faithful conversion of the Atari coin-op, a diagonal-scrolling Zaxxon format game (in contrast to the vector-graphics approach of the first two *Star Wars* titles) that should be with us in November. And, of course, *The Empire* has just struck back as well...elsewhere in this issue.

Domark are moving to new offices in the summer – to gain badly needed extra space. When you gaze into the crystal ball, you can see why...

● The Domark 'twins' – Mark Strachan and Dominic Wheatley. The software business would be a drier place without the hare-brained duo, whose publicity antics have justly earned them the title of the Twits. Don't be fooled, however – these lads have had some major software successes and know what they're up to.

BLASTEROIDS

Imageworks have signed their first major coin-op licence for the Atari game *Blasteroids* that is currently doing well in the arcades. The game is an updating of that old classic *Asteroids* – adding in filled in graphics, lots of nasty aliens and extra weapons. The conversion won't be out until early next year – until then you'll have to keep pumping those 10p pieces into the arcade machine.



Blasteroids – the arcade version

DREAMS AND VISIONS

A flying visit to the Electric Dreams/Activision offices in Southampton has revealed more details on their plans for the autumn and Christmas markets.

The big game lined up for Christmas is *Afterburner* and it will be a while before we see anything concrete for that. The rest of the coin-op licences make an impressive line up for the months leading up to the Christmas boom.

R-Type was another monster arcade hit and both Spectrum and ST versions were in evidence. The Spectrum is the furthest developed and sports some impressive graphics. It looked pretty tough (hard to tell without collision detection), but the development teams are apparently very much into 'learning curves' at the moment, so hopefully all the games will benefit as a result.

One coin-op conversion nearing completion is the ST version of *Super Hang-On*. This has been touted as an *Out Run* beater, so we can expect some fast lane duelling when it hits the streets.

Two other coin-ops in the pipeline are *SDI* and *Time Scanner*. *SDI* is derived from the American *Star Wars* project – which was probably inspired by that old game *Missile Command*. *Time Scanner* is a pinball game played on a scrolling playfield and with several different playfields representing time zones.

Getting away from the coin-op conversions, there are a couple of original products also nearing completion. There's the ST version of *International Karate* + and a brand new game called *The Incredible Shrinking Sphere*.

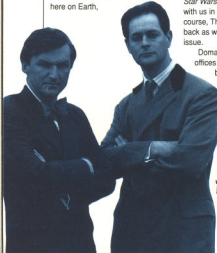
ISS is an isometric 3D game in which you control a sphere trying to get through a series of maze-like floors. The floors are made up of tiles that collapse gradually, in the order that you passed over them. Many of the tiles have special properties that change the balls' size and mass. Mix in a few aliens, tricky control and puzzles, and you've got a wacky, enjoyable game. In control terms it's got similarities to *Spindizzy*, but the action and puzzling required look to be more involved.



ST - International Karate +



C64 - Incredible Shrinking Sphere



THE IMAGEWORKS



Mirrorsoft have burst onto the market with a brand new label called ImageWorks. The company had kept a low profile over the last six months, leaving their American affiliates Cinemaware and FTL to make all the news. During that time they've been working on the new label and new games. It's a big launch for the company and Managing Director Peter Biliotta is confident about the prospects for success. 'We believe the market is ready for ImageWorks and that there is a very real demand for the calibre of product we intend to release on this brand.'

So what are the games lined up for release? The initial range consists of six games to be released over the next few months. The first is *Sky Chase*, a combat simulator giving you



Amiga - Sky Chase

the chance to battle it out in an F-15, Migs, F-18 or even a paper airplane. This is the only game in the range that has been programmed in America, and for a full rundown on its qualities take a look at the review in Screen Test.

Foxs Fights Back is a novel game idea from Denton Design, in which – as you've probably guessed – a fox decides to get

his own back on his tormentors. Don't you just love the idea of a Fox with a machine gun wasting beagles, badgers, squirrels and anyone else likely to get in his way. All this in aid of bringing back the bacon. ImageWorks could well be right in expecting *Foxs* to achieve cult status, after



ST - Mainframe

all we Brits love an underdog. It will be out first on C64 and Spectrum.

Mainframe is a game from which great things are expected. It's at an early stage of development but ImageWorks say it's got the fastest filled 3D vector graphics of any game yet. Looking at the demos we've seen so far it's hard to disagree with them – they are lightning fast. As yet the gameplay isn't fully developed but this looks like one to watch.

The new label means that Mirrorsoft is now the parent company for six different brands. In addition to ImageWorks and recently acquired strategy specialists PSS, they publish games from four American software houses – Cinemaware (*Defender of the Crown*, *Three Stooges*), FTL (*Olds*, *Dungeon Master*), Spectrum Holobyte (*Falcon*) and Mindscape (*Balance of Power*, *Deja Vu*).

'We believe the market is ready for ImageWorks and that there is a very real demand for the calibre of product we intend to release on this brand.'

● Peter Biliotta, MD of ImageWorks



Tony Crowther and David Bishop



DYNAMIC DUO

Two games in ImageWorks' new range have come from the combined talents of Tony Crowther and David Bishop. Both have been involved with computer games for a number of years. Bishop has designed the two games and Crowther, well known for titles like *Zig Zag*, *Monty Mole*, *Black Thunder* and other C64 games, has programmed them. The two new games are *Bombocrawl* and *Fernandez Must Die*.

Bombocrawl is an exciting prospect because it has levels of the game programmed by star guests – namely the likes of Jon Ritman, Andrew Braybrook and Jeff Minter. It's an isometric 3D puzzle game in which you have to blow up all the bombs and mines on a level. It looks set to appeal to everyone who enjoyed games like *Bonecruncher* and *Xor*. It will be out on five machines – ST, Amiga, C64, Spectrum and Amstrad.

If the game is received well, perhaps we'll see more games with guest programmers in them. Imagine a level of *Dungeon Master* designed by Christopher Lee, a planet from *Olds* by Neil Armstrong, or an area of *Batman* by Adam West.

C64 - Bombocrawl



The other game from the Crowther/Bishop team is *Fernandez Must Die*. It's in the mould of *Klari Warriors* – plenty of action. One of the differences is in sheer game size. ImageWorks say the game map is huge and packed with things to blast and be blasted by. This one will also be out on all five major machines.

BITMAP BROTHERS BOUNCE BACK

The Bitmap Brothers, authors of the successful shoot-em-up *Xenon*, have signed up with ImageWorks and are close to completing their new game *Speedball*. The Bitmaps were much in demand after the success of *Xenon* and ImageWorks are understandably pleased to have picked them up.

The new game *Speedball* is a future sport – the sort where the violence takes place on the pitch and not the terraces. You get a top view of a scrolling playing area where a large ball is hurled around by the players trying to score in the opponent's goal. This simple, addictive concept is added to by weapons and tackling.

The latest version we've got our mitts on looks like a very addictive and competitive two-player game, with the same sharp, clean graphic style that was prominent in *Xenon*. It will be released initially on ST, Amiga and PC.



DESERT RATS

CCS

PC £19.95dk

Coming soon for PC owners are R.T. Smith's trio of wargames. *Amneth*, *Desert Rats* and *Vulcan* are all well received by Spectrum and Amstrad wargamers (indeed *Vulcan* is still in Ace's recommended top 50 games), and with all the additional features included for PC owners, the game's should be well worth taking a look at. *Desert Rats* will be here first with *Vulcan* and *Amneth* following in September and October respectively.

PLANETARIUM

MicroIllusions/Medagenic

Amiga £39.99dk

This is a full-featured astronomy program for the novice and pro alike. Users will find a database of 9,000 stars down to the eighth magnitude and the ability to view skies in a 20,000 year span from anywhere on Earth. There's also 'Accurate Celestial Representation' that takes into account the effects of polar precession, nutation and atmospheric refraction. *Phew!* *Planetarium* is for the serious student of astronomy.

NIMITZ

Martech

C64 £9.99cs £14.99dk

Take charge of the largest and most powerful fighting ship in the world. Positioned between two warring nations, one of whom's your ally, it's not going to be easy to protect both yourself and your friends from the constant air and sea attacks. Have

SNIPPETS...

Up and coming titles for your micro



Desert Rats

you got what it takes to be able to command 6,000 men, and some 100 aircraft? This naval strategy game promises to have some heavy arcade flavouring added.

TT RACER II

Digital Integration

Atari ST £24.95dk

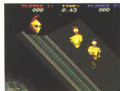
PC £24.95dk

Digital Integration are now focusing strongly on the 16-bit market with three major launches scheduled for the autumn. *A.T.F.* (ACE rated 956



TT Racer II

Spectrum version) is soon to be released for ST and Amiga and *F-16 Combat Pilot* is due out on the ST and PC. *TT Racer II*'s also moving across to the larger machines but in an enhanced version that's designed to give you all the thrills of motorcycle racing at speeds of 180 mph.



Vectorball

VECTORBALL

Mastertronic

Amiga £14.99dk

This strange football-like game's played between two droids on a pitch that's anything but flat! The ridges and valleys all affect the ball's movement and as the game gets harder, and the hills and ditches get worse, you'll have to be pretty hot to win the match. The power of your shots is determined by the length of your droid's neck - should be interesting! *Vectorball* should be out as you read this.

MAJOR MOTION

Microdeal

Amiga £19.95dk

Atari ST £19.95dk

It's down to you to rid the land of the evil Draconian League, and make the roads safe for civilians once more. In this thrilling driving game, armoured cars try to smash you off the road, spiked cars try and cut you up (literally) and the enemy assault helicopters will never be far behind with their barrage of bombs...

SHOOT-EM-UP CONSTRUCTION KIT

Outlaw Productions

Amiga Price undecided

ST Price undecided

You wanna write professional quality shoot-em-ups? But wouldn't know hexadecimal from a hole in the ground? Don't worry, this utility (already out on the C64) takes all the slog out of writing a game and let's you get down to the serious business of designing alien formations and explosion sounds. Who knows, if your creation is good enough, a software house may decide it's worth publishing.

I LUDICRUS

CRL

Amiga £24.95dk

Atari ST £24.95dk

People should know better than to start bragging when they've had a couple of jars. *Ludicrous* didn't know any better, and now his claims have landed him in the arena where he's going to have to prove he's as good a fighter as he'd claimed to be. Serves him right really.



Nimitz

LOOK AND FEEL...

When you've just spent a large sum of money on an arcade licence, probably the last thing you want to have happen is a rival company getting a similar product into the shops first. That's what Titus has managed to do with *Fire and Forget*, which is not a million miles removed from U.S. Gold's officially licensed conversion of the popular Atari coin-op *Roadblasters*.

Naturally, the Brummie Big Boys are upset and are looking at the U.K. copyright laws, which Richard Tidsall - Gold's Product Marketing Manager - claims are 'weak' and 'difficult to change'. U.S. Gold don't, as yet, have any firm plans to lobby for changes in the law but Richard was adamant that 'anything that could be done, would be'.

Readers may be aware that Apple in the USA are taking a very strong line over the alleged similarities between Microsoft windows and Apple's very own Macintosh user interface, so - although difficult to implement - legal action on 'lookalikes' is not completely out of the question.

Meanwhile, unkind readers may recall US Gold's very own *Ramparts*. The game not only played like *Medagenic's* (then *Activision*) *Rampage*, (which was a big arcade licence) but the adverts carried a first smashing through the game's title - just like *Medagenic's*! Richard hastened to assure us however, that any similarity between the two games was 'just your opinion'.

WHIRLIGIG



Atari ST screen shots.



A blaze of starfire sprang from the engines as the newborn starship shuddered into life. Seconds later it was blazing through the cosmos in search of the Whirligig — a portal to space, time and freedom.

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WIN AN ATARI ST!

Has your ACE card come up trumps this month?
There are 25 great prizes.



For everyone who's received a free ACE card (if not, see below on how to get one), here's another great opportunity to win prizes.

Using the NEW program (see NEW PROGRAM! box), just type in the 28 new 4-letter codes printed on this page. If the program converts one of them into your personal number, you're a winner!

WE WANT A WINNER!

From now on we are printing **FOUR** winning codes for the ACE card. If the owner of the **1ST CLAIM** code hasn't claimed his prize by the closing date it goes to the owner of the **2ND CLAIM** code. If he hasn't claimed his prize by then it goes to the owner of the **3RD CLAIM** code...and so on. Should the 1st Claim owner claim his prize, the owners of the 2nd, 3rd and 4th claim codes automatically qualify for one of our **SECOND PRIZES**.

NEW PROGRAM!

In order to accommodate the **HUGE** number of entries for the ACE card competition we've had to **modify** the program slightly. **MAKE SURE** you type in the revised program.

LOOK AT THESE PRIZES!

ONE 1st PRIZE: ATARI ST + COLOUR MONITOR

1st claim XKQM 2nd claim WYRC 3rd claim XFCG 4th claim YUOL

FOUR 2nd PRIZES: £50 of software – chosen from the ACE Special Offer pages

The winning codes: VXAN·VBIA·YDAG·XIOR

TEN 3rd PRIZES: £25 of software – chosen from the ACE Special Offer pages

The winning codes: ZHZV·VQIW·WOQQ·UOWI·VSTC·XFLF
·VETA·YOWC·ZRQX·YLOX

TEN 4th PRIZES: A year's free subscription to ACE magazine

The winning codes: WGBW·WUIO·ZNSX·WZAZ·ZJSC·VOJI
·ZZRM·YFCS·UIID·UNBV

HOW TO CLAIM A PRIZE

If you are one of the winners, you may claim your prize simply by posting us your ACE card together with a note saying which prize you are claiming and from which issue of ACE.

If your prize is for software, list carefully the software you would like from the selection printed in the ACE Reader Offer pages (94-95). Assuming your claim is valid, we will forward your prize and return your card within 28 days (probably much sooner).

Post to: ACE CARD PRIZE CLAIM, 4 Queen Street, Bath BA1 1EJ Closing date for claims September 12th, 1988

HOW TO OBTAIN AN ACE CARD

If you missed the April issue of ACE, you may obtain an ACE card free of charge by sending us a stamped self-addressed envelope together with a signed statement saying that neither you nor anyone else in your household already owns an ACE card. Apply to:
ACE CARD REQUEST, 4 Queen St, Bath BA1 1EJ
(This offer valid while stocks last).

THE DECODER PROGRAM

This short program listing will DECODE the 4-letter codes printed below next to the prizes. It turns each code into a five-digit number such as the one printed on your ACE card. All you have to do is type in the program using the instructions for your computer printed below.

Then RUN the program. It will ask you to input each of the prize codes in turn and will then reveal on screen the winning numbers. If your number comes up, YOU CAN IMMEDIATELY CLAIM YOUR PRIZE!

If you are unable to get the program to work, a list of the winning numbers, correctly decoded, may be obtained by sending a stamped addressed envelope to: ACE September winners list, 4 Queen Street, Bath BA1 1EJ

C64, CPC, ST, AMIGA version

```
10 FOR A=1 TO 28:INPUT "Code":B$
20 B=0:FOR C=1 TO 4:B=B*26
30 D=ASC(MID$(B$,C,1))
40 IF D>90 THEN D=D-32
50 B=B+90-D*NEXT C:PRINT "Winning Number is":B:NEXT A
```

SPECTRUM version

```
10 FOR A=1 TO 28:INPUT "Code":B$
20 LET B=0:FOR C=1 TO 4:LET B=B*26
30 LET D=CODE B$(C TO)
40 IF D>90 THEN LET D=D-32
50 LET B=B+90-D*NEXT C:PRINT "Winning Number is":B:NEXT A
```

TYPING IN THE PROGRAM

SPECTRUM

48K: Power on, and type the Spectrum listing in as shown, pressing ENTER at the end of each line. To get the word CODE in line 30, hold down caps shift and symbol shift keys together and press the letter i key. When you've typed all five lines in correctly, press F1 to RUN followed by ENTER. Now type in the codes one at a time, pressing ENTER after each one: the program will stop after you've typed in all 28 codes.

128K: Start 128K BASIC mode from the start-up menu and type in the Spectrum listing as shown, hitting ENTER at the end of each line. Type RUN, hit the ENTER key again and type the codes in as for the 48K Spectrum above.

C64/128

Type the listing in as shown, hitting the RETURN key at the end of each line. Type RUN (don't use the RUN/STOP key), hit RETURN and then type the codes in one after the other.

AMSTRAD CPC

Type the listing in as shown, hitting the RETURN key (RTD) or the larger of the two ENTER keys (M4 or M44) at the end of each line. Type RUN and hit RETURN or the large ENTER key again - don't use CONTROL, and the small ENTER key here - and type the codes in one after the other.

ATARI ST

Put the LANGUAGE disk in the drive and switch the ST on. Double-click first on the drive A icon and then on the BASIC.PROG icon to load Basic. Type EDIT and press the RETURN key. Now type the listing in, hitting RETURN after each line, and press the F10 key when you've typed all five lines in. Now type RUN, press RETURN again, and type the codes in one at a time.

AMIGA

Switch on, put your 'Workbench' disk into the drive and wait for the desktop to appear. Now put your 'Amiga Enter' disk in the drive, double-click on the EXTRAS icon and then double-click on the AMIGA BASIC icon. Type the listing in as shown, hitting RETURN after each line, and then click on the BASIC (rather than the LISTING) window. Type RUN, hit RETURN and then type the codes in one at a time.

OTHER MACHINES

The C3A, CPC etc listing is standard Microsoft Basic, so it ought to work on most systems. If you can't get it to work on yours, write to us for a list of winners - details of this are printed above.

RULES

1. This promotion is open to everyone with the exception of employees of Future Publishing Ltd and anyone involved in the distribution or retailing of Advanced Computer Entertainment magazine.

2. Ownership of the ACE card is limited to one per household.

3. Each four-letter code printed in the magazine corresponds to a winning 5-digit number on one of the ACE cards.

4. The codes must be correctly decoded using the program printed each month in this magazine.

5. Claims for prizes must be received by first post on the closing date at the latest. The value of any unclaimed prizes will be carried forward to future issues.

6.4. due to a production error, more than one person claims a single prize, the publishers reserve the right to divide the prize between the claimants.

7. In the event of any dispute, the decision of the publishers is final.

ZYNAPS



ZYNAPS:
the most
imaginative sci-fi
shoot-em-up game
yet, from Hewson.
It has a combination
of 140 possible story
sequences to fire your
imagination. Zynaps is
a game constructed like
a comic book, with three
chapters and four
episodes of mind-
blowing action. Each
part gets tougher
until our hero faces
the final conflict . . .
It's the battle
to end all
battles!

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Hewson Consultants Ltd

As part of our continuing development of innovative software we are always
happy to evaluate software sent to us with a view to publication

ATARI ST Series £19.99
COMMODORE AMIGA £19.99

For more information on the Zynaps software, contact Hewson Consultants Ltd, 56b Milton Park, Milton, Abingdon, Oxon OX14 4RX. Tel: 01235 831911. Fax: 01235 831912. E-mail: hewson@hewson.co.uk. Website: www.hewson.co.uk



VIP GLOBETROTTER!

ACE and IMAGEWORKS are sending this month's prizewinner to the Festival De Micro...absolutely free!

THE PRIZES

ACE and Imageworks are going to make you a globe-trotting VIP – literally! This October sees one of Europe's most important computer shows in Paris – the Festival De Micro – and we're offering an all expenses paid weekend for two in Paris to attend the fair, where you will receive VIP status and be escorted by Ubi Soft – Imageworks' French distributors.

You'll have plenty of time to explore the city with your companion (the prize covers two people, at least one of whom must be an adult over the age of 18) and in addition to being taken out to dinner by your hosts, you'll also receive free travel vouchers for the Paris Underground to help you get about AND a de-luxe goody bag of new Imageworks gifts including a sports bag, watch, T-shirt, pens and notepads.

Five runners up will also receive goody bags with similar contents, so if you miss out on the trip you may still be able to go around in style!

The dates of the show are from Friday 14th



ST - Fernandez

October to Sunday 16th October inclusive. Mark it in your diary now and keep your fingers crossed!

FERNANDEZ – THE GAME

Imageworks reckon that Fernandez Must Die is THE action game for Autumn 1988 as you fight your way through Fernandez's army, make your way by jeep and on foot across the country to

destroy the military bases and, of course, your target – the tyrant Fernandez himself.

On the way you will encounter armies, parachutists, planes, trains, jeeps, ammunition, and secret gold dumps in your quest to reach your target and release the state of El Diablo from his tyranny. Most formats will feature 2-player options and the game will be available on the Imageworks label for the Amiga, Atari ST, C64, Spectrum, and Amstrad CPC.

WHAT YOU HAVE TO DO...

Just fill in the form with your name and address (and telephone number for us to contact you during the day if possible) and then answer the three questions correctly. Then post it to ACE Imageworks Competition, 4 Queen Street, BATH, BA1 1EJ to arrive not later than September 5th. On September 6th we'll pick six correctly-completed forms at random – the first will take first prize and be off to Paris, the remaining five will receive the runners-up prizes. Go for it!

ENTRY FORM

NAME
ADDRESS
..... TEL NO

Tick the box opposite the correct answer to each of the three questions below:

1. Che Guevara was

- a) A Mexican soft drink ☐ b) A revolutionary ☐ c) Clean shaven ☐

2. Robespierre was

- a) Sent to the guillotine ☐ b) Dressmaker for Princess Dianna ☐ c) A hairdresser ☐

3. Lenin was

- a) A Labour politician ☐ b) A Bolshevik ☐ c) Inventor of a new washing-powder ☐

Your answers to the following questions are not part of the competition and do not affect your entry, but we would be grateful if you could take time to tick the relevant boxes:

Do you buy:

Mostly full-price software ☐ Full price and budget software ☐ Mostly budget software ☐

Which (if any) of the following magazines do you read:

Your Computer ☐ Amstrad Action ☐ ST/Amiga Format ☐ Games Magazine ☐
Computer and Video Games ☐ Personal Computer ☐ World Popular Computing Weekly ☐
ST Action ☐ Amiga Computing ☐ Your Sinclair Sinclair User ☐ Zzap!64 ☐ Crash ☐
PC Plus ☐ 8000 Plus ☐

Other magazines (please specify)



IMAGEWORKS – THE LABEL

Imageworks is a brand new label created by Mirrorsoft – the people who brought you *Olds* and *Dungeon Master* – to cater for both 8-bit and 16-bit users.

Imageworks are really going to be putting their back into it during the coming year...releasing at least 18 games. According to Managing Director Peter Blotta, 'We have an excellent range of software for publication during the remainder of 1988 and our future plans are even more exciting. Imageworks will offer the consumer quality products and we believe the response will be extremely favourable.'

Mirrorsoft have really bumped up their profile in the last few months – check out the news story on page 7 for details of another of their recent moves – a joint venture with Telecomsoft and Psychosis.

THE RULES

1. Employees of Future Publishing Ltd, Mirrorsoft, and their families are not eligible for entry.
2. Closing date September 5th 1988.
3. The decision of the judges is final and no correspondence will be entered into.
4. Only one entry per household.
5. No purchase of ACE magazine is necessary and photocopies of the entry form are acceptable.

Are You Good Enough to
TACKLE

STAR
BUY

HOTSHOT

There is so much in Hot Shot - you need to be a crackshot, a pinball wizard and an ace controller. Have you got what it takes to beat Hot Shot?

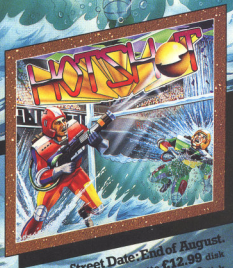
GOLD
LABEL
AWARD



Screenshots from Atari ST version.

Universally acclaimed as the greatest game this century, Hot Shot has exceeded all expectations, out of hundreds of games only two have qualified for Addictive's Gold Label award. These are Football Manager 2 and Hot Shot. Hot Shot is so action-packed, before you buy, read the back of the Hot Shot box. Available at all quality stores.

"A fast, addictive challenge. Original and humorous." Games Machine
"It looks fabulous ... and well, it looks too." Sinclair User.



Street Date: End of August.

CBM 64/128 - £9.99 cassette £12.99 disk
Spectrum - £8.99 cassette, +3 £12.99 disk
Amstrad - £9.99 cassette £12.99 disk
Amiga - £19.99 Atari ST - £19.99
IBM PC - £19.99

No. 1

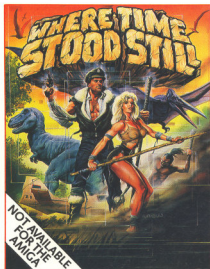
Go For Gold... It's Totally Addictive

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AMIGA

£24.95

FUEL FOR THE

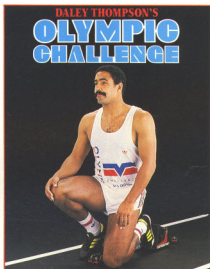


Your plane has ditched on a mountainous plateau somewhere in deepest Tibet. You and your companions are alive. A large shape moves toward you, you rub your eyes in disbelief; a Dinosaur! — where are you ... and when? Stunning, monochromatic 3D graphics and 4 way scrolling, give that '50's cinema mood as you learn not only to survive, but also that your companions are not all they first seemed!



FROM

ocean



Digitised graphics, referencing from full colour photographs of Daley Thompson himself, take full advantage of the Amiga's and the Atari's capabilities giving you a state-of-the-art sports simulation. Featuring an optional game play which allows you to 'work out' in the gym where your performance will directly affect your performance in the final events themselves — another first for Ocean!



FROM

ocean



Dinamic's attention to detail and superior graphics presentation add an extra dimension and Army Men is no exception. A full-blown shoot-em-up tale, you'll be through several levels where you will take command of first an armoured jeep, then helicopter and finally, on foot as you make your way through the jungle to the enemy's headquarters, ultimately to seek out the documents.

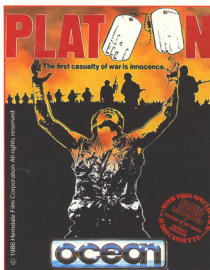
FROM

ocean

16 BIT IS THE

ATARI ST £119.95

ENTERTAINMENT



Exceptional graphics, innovative game design and digitised sound all add up to recreate the atmosphere generated in the box office smash hit. Closely following the original storyline you take your platoon, selecting individual men for assignment, who will encounter the enemy and their many booby traps as you seek to find the enemy's underground headquarters. On entering the warren of tunnels you will need flares and a keen eye – your enemy will lunge at you, from beneath the waters which flood the tunnel floor, wielding vicious knives – the atmosphere itself is enough to kill!



FROM
ocean



One phrase sums up the success and appeal of Arkanoid – "I'll just have another go!" Arkanoid is addictive! Using all the capabilities of the 16 bit micro this conversion is almost an exact replica with all the excitement of the original Taito coin-op smash hit. This is Arkanoid – the blockbuster.



FROM
the name of the game

OF THE ART



ST - Mind out for the pyramids, bikes and the ground as well.

SPACE RACER

Loriciels

The French invasion continues even without the aid of the Channel tunnel. This latest from over the water is a racing game along the lines of Gee Bee Air Rally. The graphics are far superior, as you can see. Very detailed backgrounds and excellent use of colour. You fly a jet bike along a winding, undulating course, trying to avoid the other racers and the obstacles. For once you even get to see other riders make mistakes and crash. Watch out for an English version soon.



ST - a spin around Zeltweg at the Austrian Grand Prix

VROOM

Lankhor

New boys Lankhor have only had one game released so far - Killdozers. However, there are more in the pipeline including this driving game. There aren't many decent racing games on the ST - it doesn't even have Ferrari Formula One - so a good one could do well. It does have Out Run and the soon to arrive Super Hang-On, so we can look forward to ripping up the roads this Autumn.

INTENSITY

Firebird

This is the latest from Andrew Braybrook, so 8-bit owners will doubtless be eagerly awaiting its arrival. Its scenario is distinctly Defender-like, with you rescuing colonists and blasting aliens. As with Morpheus you can improve the ship's capabilities. You can see the game has Braybrook's slick graphic style, and hopefully when its finished we'll have another game packed with furious gameplay.



CGA - save those colonists, waste those aliens...

COMING ATTRACTIONS

You've seen the ads and you've heard the hype, but now you want to get a look at all those games soon to hit the streets. That's what ACE Previews are here for - a sneak peek at games that should hit the shops within a couple of months. All that glisters is not gold, but shining on these pages will be some of the hot games of tomorrow.



OVERLANDER

Elite

Another game with a definite Roadblasters look to it. You have to battle along a road-way past jeeps, bikes, roadside gun emplacements - all trying to blast you off the road. Notice the similarity of graphic style to Space Racer and Space Harrier - obviously the French programmers are making good use of their graphic expertise on the ST.



ST - the sports car encounters death dealing jeeps.

GARY LINEKER'S SUPER SKILLS

Gremlin

Despite England's debacle at the European Championships, Gary Lineker is still one of the biggest names in football. Besides, in this game you can get Gary back in shape for talking on the world's best. The training programme includes the gym section - where you build up fitness and stamina - ball juggling, and field work where you can practice dribbling, chipping, shooting and penalties.



EMLYN HUGHES INTERNATIONAL SOCCER

Audiogenic

I know what you're thinking - not yet another football game! However, when you think about it the only really decent football simulator so far has been Match Day 2. This one shows a lot of promise but a few features were missing from this version - including the prospect of having individual player strengths as in strategy games. Amongst the other features implemented are sidestepping, barging, backheels, heading and sliding tackles.

ST - this is a ball Gary. You're supposed to try to put it in the net.



C64 - Emlyn must be the blurred figure headed for goal.



Menace - don't panic those are just aliens trying to kill you.

MENACE

Psychapse/Psygnosis

Remember way back to the days of the Imagine mega-games and the subsequent collapse of the company? The games and their authors reappeared in various guises, Psychapse being one of them. Now their new label takes the name of one of the two mega-games - hopefully not a bad omen. This first game on the label isn't in the 'mega-game' mould but is a shoot-em-up with the usual add-on weapons and nasty aliens. How will the gameplay measure up to other 16-bit blasters?



ST - the delightfully deep graphic tones as the Space Harrier blasts his way across the landscape.

SPACE HARRIER

Elite

The classic coin-op is nearing completion on the ST. The graphics are fast and furious, and those aliens are big and bold. The dragons are particularly impressive, weaving around the screen and letting loose barrages of fire.

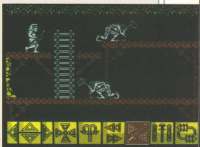
Heavy stuff indeed facing our airborne hero.



BARBARIAN

Psychosis/Melbourne House

Here's a turn up for the books - a 16-bit game being converted down onto the 8-bit machines. It has happened before with the likes of Skanglicker and looks set to occur increasingly often with games like Carrier Command and Virus also making the transition soon. The graphics obviously aren't anywhere near the standard of the 16-bit versions, but the gameplay should be much more attainable.



Spec - Hegor encounters some nasty looking creatures.



C64 - Is this guy looking for a fight? - yup.

Can You Stop The Russian Bear?



Based on the NO.1 best-selling book *Red Storm Rising* by Tom Clancy; Larry Bond co-author. Copyright 1988 by Jack Ryan Enterprises Ltd and Larry Bond. All rights reserved.

The storm has broken. MicroProse's latest title is here.

This high technology simulation of strategy and tactics is based on one of the most dramatic and detailed stories of modern warfare – *Red Storm Rising*, the international best-seller by Tom Clancy, the international collaborator Larry Bond.

Working with the authors, MicroProse have brought the book's intense action and excitement to your computer screen. You are put in command of an American nuclear attack submarine at a time when the two super powers collide.

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RED STORM RISING by Tom Clancy © 1988 by Jack Ryan Enterprises Ltd and Larry Bond.

Please send _____ Copies of *Red Storm Rising* C64 Cassette _____ Disk _____

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I enclose £ _____ including 55p P + P. Cheques payable to MicroProse Software Ltd _____

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MicroProse Ltd., 2 Market Place, Tetbury, Gloucestershire GL8 8DA, UK. Tel: (0666) 54326. Tlx: 43422 MPS/UKG.

PC PAINTING DELUXE

Amstrad's rumoured new machine (see page 7), suddenly puts the future of MSDOS in a whole new light. A cheap MSDOS home computer could give you access to some pretty smart software. Brian Larkman checks out one of the giants...

The first of a new breed of software has entered the IBM PC graphics market – the porting of a successful Amiga product – *Deluxe Paint II*. Whether this will be followed by *Photon Paint PC* or *IBM Paintmate* remains to be seen, but there is no doubt that the superiority of *Deluxe Paint* on the Amiga has been included with the transfer to MSDOS: there is no IBM compatible paint program to match it.

Regular users of Amiga *DPaint* will have no problems adapting to the PC version (once they have got past the unfamiliar operating system) – the interface is the same

carefully balanced combination of discrete icon block on the right and menu bar at the top. Yet beneath these simple trappings lies the amazing power of the program. Examining the menu bar reveals a wide range of options, many of them contained in sub-menus. Similarly, almost any icon can also bring up requestors allowing the default features to be changed with – at first sight – a bewildering range of options.

Pressing the left button over an icon



Great software, but pricey hardware. However Amstrad's plans may include a cheaper MSDOS system. He did with CPM – can he do it with MSDOS?

THE FILL FACTOR

Most painting packages provide a means to do a flood fill, i.e. flooding an area of pixels of a particular colour with the current (chosen) colour up to any boundary of pixels of a third colour. *DPaint II* is no exception, and 'flood fill' is the default fill mode. Selecting Fill with the right mouse button brings up a requestor providing a range of other fill possibilities. If a 'custom' brush is in use, selecting the Pattern box will allow filling with a repeated pattern of this brush. If Perspective is in operation (see Perspective box) and selected in the fill requestor the fill will be in perspective.

Dithered 'Gradient' fills are also possible. Any group of colours previously selected as a colour cycling 'range' can be used to fill an area dithered to produce a smooth gradation either vertically or horizontally. A three-dimensional effect can be produced with a third dither effect that fills each horizontal line independently, thereby emphasising contours.

The only fill effect not provided is an area fill to a colour boundary, and even this can be achieved using Background (see box).

allows the selection of the usual range of drawing functions: standard brushes, dotted and solid freehand, curves, airbrush, flood fill, regular and polygon boxes, circles and ellipses – outline and filled, gridlock, text, magnify, plus a symmetry toggle and a simple to operate but immensely powerful user-brush selector. Below these are the current fore and background colour indicators and the palette, which displays from 2 to 256 colours, depending on the capabilities of the machine used.

Icons selected with the right button

YES, SIR!

ACE's graphics section has proved so popular that we've now made the infamous Brian Larkman one of our new Consultant Editors – and that means some exciting developments for all of us. From now on, Brian will be presenting his 'magazine-within-a-magazine' every month – a complete guide to computer graphics including:

- Regular reviews of the hottest graphics software;
- **Graphic Accounts** – the latest news of up'n'coming releases;
- Further instalments of Brian's excellent DIY series for budding computer artists;
- and, from next month, **Pixel Post** – a colourful readers' letters section entirely dedicated to matters graphical.

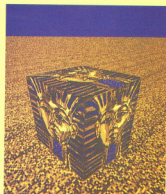
Get into the act! Drop Brian a line with your views, problems, and gossip and he'll do his best to help. The address is:

Pixel Post
ACE magazine
4 Queen Street
BATH
BA1 1EJ



The man himself. We promised Brian we wouldn't give too much away, but just for the record he works at York College of Art and Technology and specialises in... computer graphics. He's totally dedicated to his subject and reckons that there are... certainly lots of career openings in computer graphics. The best thing you can do is learn either programming (probably a university course) or go to Art College. Unfortunately no-one seems to have combined the two approaches as yet, but Art College is probably the best bet – although I'm obviously biased because I work at one. The art colleges are buying up loads of equipment at the moment because the graphics industry is compensating at an astonishing rate. Check out the continuation of Brian's excellent DIY graphics course in the months to come...

PERSPECTIVE



As well as the usual 2D block manipulation tools – rotate, mirror flip etc – any area of the screen cut as a 'brush' can be manipulated in the third dimension. Selecting PERSPECTIVE on the brush menu allows the current block (in the form of a wire frame rectangle) to be rotated around the x, y and/or z axes. Moving the now distorted 'frame' around the screen shows that it is not just the block itself that has been rotated, but the whole 'screen-plane'. Thus if the block is moved towards the 'horizon' it gets smaller. Using Perspective it is relatively easy to change a flat, square picture of King Tut into three sides of a cube. A few airbrush bursts of several golden brown tones, picked up as a brush then used as a perspective fill provide the desert wastes.

BRUSHING UP

Another standard feature of many drawing systems is the ability to move and transform areas of the screen by 'framing' them with a box. This 'frame' or 'window' can then be pasted down anywhere on-screen either as it stands or rotated or flipped (mirrored) in some way, usually with a transparent background colour. This allows irregularly shaped objects to be pasted down without a border. They can also be saved to a disk library of 'clipart' for later use. Deluxe Paint uses a similar technique, except that these 'frames' can be used as custom brushes. Any size up to a full screen can be cut and pasted down. In most cases the paste is so fast that this brush can spread colour onto the screen continuously in a most spectacular way. If cycle is selected on the Mode menu, the whole brush changes to the current colour, and with each paste cycles to the next shade in the range. This can be used to produce animation of an image with Colour Cycling.

Other modes include Smooth – colours within the area under the brush are averaged, producing a smooth 'anti-aliased' look; Shade – affected colours are darkened or lightened slightly to form shading or highlighting effects; Blend; Smear and several other colour transformations.

Transformations of form as well as of colour can also be applied to DPaint brushes. Any brush can be scaled up or down in size, rotated through any angle and bent horizontally and vertically (or in shear). Overall, it is probably its use of brushes that is the most powerful tool of the program.

BACKGROUND AND STENCIL

These two functions in particular mark out DPaint II as something quite different in the run of PC painting packages. When Background is selected, the complete picture is set as a background over which all later drawing actions have no effect until Background is deselected. Using this technique it is possible to try out a new idea over the top of the original without affecting it. If something goes wrong, even after a number of different actions, selecting Clear will remove them all, leaving the original still on-screen. Another use is in the production of a mask or outline. Drawing carefully over the 'background' in a contrasting colour, a detailed outline of a subject can be drawn. It is then a simple matter to pick it up using 'frame' and paste it down on the spare screen.

Stencil is, in effect, a means to 'turn off' any colour or group of colours so that screen actions do not affect them; they become 'protected'. Stencil can be used to place part of a brush behind a section of the screen image. For example, if you have drawn a landscape and later you wish to draw the sun setting below the horizon it is a simple matter to protect all screen colours except those of the sky and paste the sun down. It will appear that the sun is behind the protected colours of the land and in front of the unprotected ones of the sky.

reveal requested used to modify the action of the selected tool. Standard brushes can be enlarged or reduced, dot spacing changed, spray density intensified, fill type altered (see box), grid size, symmetry type and order, palette – almost every function can be modified to taste.

The real power of computer drawing is the ability to transform the picture once the initial form has been produced. The seven headings of the menu bar contain tools that allow almost every transformation imaginable, both of shape and colour, as well as a number of other more mundane functions, such as picture file management, printing, page size, screen format and fonts.

Many of the most useful 'transformation' tools are applied to or by the user-defined 'brushes' discussed in one of the side boxes. Two other extremely useful facilities – BACKGROUND and STENCIL – are also described in detail in a box.

CONCLUSION

Deluxe Paint II for the IBM PC and compatibles is not the ultimate drawing-program, but the prospect of getting it on a cheap

To produce a decent 'hard copy' you must first have a printer – any printer, as long as it can print graphics. Leaving the exotics of colour and laser aside, this means a dot matrix printer with preferably 24 but probably 9 pins, and a quad density capability (see the box). Next you need software that uses your printer to the fullest of its capabilities.

This is where you stop – and think – and realise that there is none. Even for the Amiga and certainly for most of the 8-bit machines there is virtually no commercial graphics program that provides a printer dump to utilise an ordinary dot matrix printer to the full. The exception (there always is one) might surprise you: it is MICRO DESIGN for the Amstrad CPC range available from Siren Software. Although it is flawed in one or two areas, Micro Design is exceptional in the way it has been designed specifically to produce the highest possible quality of output from an ordinary dot matrix printer on A4 size paper.

Even with a 9-pin printer the dots produced are so small that a 'dot-for-pixel' printout of a normal screen would only be about 10cm by 6cm. Micro Design employs a working area larger than the screen that will print out dot-for-pixel a full A4 size picture. Many other systems including AMX Supercat for the BBC and Amiga Deluxe Paint will do this. Where Micro Design scores is in its ability to print out the full page in quadruple density with the paper advancing only one point (pin-point) each time the printhead passes. The result is extremely dense, black printouts without the characteristic banding of dot matrix printers – very slow but almost unique in my experience.

In most other respects Micro Design is a strange beast, neither fish nor fowl, some-



Fifty bucks. But doesn't DPaint make it look pretty?



Great range of colours can give impact to even simple designs. Drawing tools can help you set up an image like this one in no time at all.

home MS-DOS machine is tantalising to say the least. It is always possible to think of tools that would be useful (French Curve/fitting to polygon lines and 'contour mapping' are two further candidates), but it is hard to think of any important facility that could be provided at this level of hardware and which is absent here. The larger palette available with an MCGA board makes some of the colour transformations very much more effective, but for normal mortals using 16 colours the program is still a vast improvement over anything else available for MSDOS machines. ●

GETTING IT DOWN

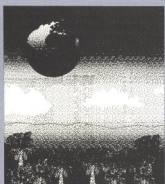
Computer artists good, bad or indifferent, have you really thought about the quality of your graphic output recently? Have you examined closely the last printout you produced? Do you even bother to DO black and white printouts of your pictures considering how bad they usually look? Unless you are one of the few who have colour or laser printers or VCRs, you are stuck with a whole bunch of artworks that can only be seen properly on a monitor. In most cases this is art for your eyes only. Let's see what we can do about it.

where between a DTP and a PCB program (though it makes no claims to DTP aspirations). Any AMX compatible mouse can be used, though the 'one-handed' operation made using the numeric keypad is so simple and effective most users will prefer this to a mouse. Drawing elements (icons) are designed in a rather rudimentary Icon Editor. It would probably have been better if this was a separate program so that more tools could be added to make design easier. Up to 66 can be stored in memory and more sets saved to disk.

Drawings are assembled using the icons designed earlier, plus the tools provided on the Design Page. Only Airbrush is missing of the common tools. Points, ellipses and rectangles can be produced, filled with a repeated icon pattern if desired. Any area of the screen can be cut or copied, saved to disk, flipped (but not rotated) and pasted once or repeatedly. Over twenty useful fonts are provided on disk, plus a good range of icons, patterns and example pictures.

Pictures from any other CPC program can also be included with a simple utility to convert them to Micro Design format. This widens the usefulness of the package greatly by encouraging its use as a utility in conjunction with other CPC paint packages. Rainbird's Advanced Art Studio, for instance,

has far better drawing tools, but is limited to a screen size drawing area and an inferior printer dump. Overall, Micro Design is a good drawing package and, in conjunction with a more powerful paint program, an exceptional print and large picture assembly utility.



Even with a standard 9-pin dot matrix, you can get some decent results from your graphics file. Whatever your software/hardware, experimentation pays off.

PRINTING DENSELY



Epson's 24-pin LQ-850 gives great quality but is still expensive at £850. Other manufacturers are introducing 24-pin models from around £350 and details/prices change daily. Shop around for a bargain, but make sure you see a print-out in the shop before you buy - and always check compatibility with your software as well.

Most dot matrix printers have a vertical row or matrix of nine pins which can be 'fired' in any order against an inked ribbon to transfer ink onto the paper. As the print-head moves across the paper 8 or 9 lines of dots can be produced in the pattern required. There is a small but finite distance between each line because of the mechanics of the head and between each vertical row depending on the speed of printing. These gaps can be reduced by slowing down the print head and by making several passes across, advancing the paper a very small amount each time. Most 9-pin printers can print into the gaps once (double density) and some twice (quadruple density).

24-pin printers have three vertical rows of 8 pins slightly offset from each other producing double and quadruple density effects in one pass. The pins are also slightly smaller, allowing an even smaller dot size.

IF YOU CAN DRAW IT, MOVE IT...

Almost all new graphics packages appearing these days for the Atari ST seem to combine paint and animation. Three recent arrivals look particularly interesting, and each one provides some degree of animation.

QFA ARTIST (MichTron £49.95) uses a dual mode screen to offer 80 column, icon-based function selection and a lo-res drawing area. The drawing area can also be in one of two modes. Animation takes place in the normal 16-colour mode, but by taking over the whole processor, a 1000-colour, static lo-res mode is available. All the usual drawing and sprite animation functions are provided plus some interesting extras. Amazingly, or perhaps not so amazingly, a large part of the program is written in GFA-BASIC with machine language integrated in where necessary for the special tricks.

Kuma are breaking new ground with their drawing and animation offering curiously titled **K-RIKKI** (£19.95). Operating only in medium and high resolution the program is probably better suited to accurate technical illustration. Most of the common functions are available though block transformations are limited (eg no rotation). Animation is also limited to 'page flipping' all of the pictures in memory (though this could be more than 100 on a 104ST).

CYBER PAINT (Antic/Electric Distribution £69.95) fills in the major gap left by the otherwise excellent Cyber Studio suite, post production. Once a Cyber Studio animation was complete it was a somewhat laborious task adding backgrounds and other special effects. Cyber Paint simplifies this process by providing a



simple method of registration for cel animation. Many other features are offered including the usual drawing tools, 3 axis block manipulations and tweening (intermediate cel generation for animations).

MORE SUPERSLIDESHOWS

Following on from last month's feature on adding a bit of production to your slideshows, two more 'super-

GRAPHIC ACCOUNTS

New and exciting graphics products keep falling onto the shelves - now you can keep track of what's new and what's hot with ACE's own dedicated graphics news section.

slideshows' have appeared - one each from the two original supporters of Amiga graphics.

AEIGIS VIDEOTITLER

(Aegis/HB Marketing £110.40) is primarily a semi-professional title generation system. A wide range of fonts are supplied and even more can be used from Calligrapher. Up to ten can be loaded at once and displayed in 20 different styles. Several poly fonts are also supplied allowing smooth scaling and distortion. All Amiga resolutions, overscan and Extra-Halfbrite are supported and any IFF picture can be used as a background.

For our purposes the second part of the Aegis package, **VIDEOSEG** (VideoTiter Special Effects Generator) is of more interest. Any IFF image, including titles from VideoTiter and ANIM animations, can be wiped on and off screen with dozens of different transitions including burst, scroll, fade and zig zag. An easy to use interface allows complex presentations to be assembled and played back, either automatically or manually.

DELUXE PRODUCTIONS

from Electronic Arts allows high quality video presentations to be assembled. Titles, 16 colour high resolution pictures and animated objects can be controlled quite simply using the storyboard design interface. Up to 12



EUROPEANS NOT TO BE TRUSTED YET?

First the good news! All of Electronic Arts' 'Creativity' series for the Amiga - Deluxe Paint II, Deluxe Video, Deluxe Music, Deluxe Print etc - are to be issued in future unprotected. All previously purchased titles can be replaced for a nominal sum with versions without copy protection.

The bad news? It seems that this offer only applies to North America. Does this mean all the Europeans are not to be trusted yet? Or is the news of the change in policy going to take as long to get here as PAL versions of NTSC software? If you want to test your chances try contacting Electronic Arts at Langley Business Centre, 11/49 Station Road, Langley, Berks. tel. 0753 49442.



scenes per production, each with 5 static or animated clips can be wiped in up to 40 ways in any order, all using double buffering for smooth transitions. Overscan, broadcast quality fonts, chained productions (for loops), and many other facilities combine to provide a useful tool for professional quality video presentations. The price is also quite professional at £139.95.

Of more interest to ACE graphics artists is **DELUXE PHOTOLAB** (£69.95). Three of the most useful post-DeluxePaint II graphics oriented utilities are omni-colour paint systems, image processing packages and variable scale print programs. Deluxe Photolab provides all three on one disk in the form of separate programs. The paint system is



Deluxe Photolab

1 inch square, anti-aliasing the enlarged pixels of giant prints to give a smooth appearance.

Considering the integrated nature of the package the only pity is that direct transfer of pictures between the three modules (by means of the Amiga's clipboard facility) while multi-tasking was not implemented.

AMIGA ANIMATION COMPETITION

Against the backdrop of the Edinburgh International Festival, Amiga Centre Scotland have organised an Amiga Computer Animation Competition, to be followed by an exhibition and workshop. The workshop will be open from 11th to 20th August. Unfortunately we went to press too late to get you into the competition, which closed at the end of July, but you can still go along for the workshops and exhibition.

Details from: Iain Anderson, The Amiga Centre Scotland, 4 Hart Street Lane, Edinburgh, EH1 3RN, Scotland. tel 031-557-4242

PROTECTIONISM AFTERTHOUGHT

In view of the problem with protection on European versions of Electronic Arts' 'Creativity' titles (see box), it is interesting to note that the two most recent products, Photolab and Productivity are without protection. ●

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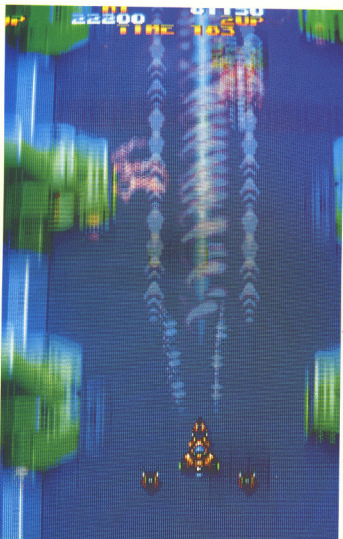
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TRIKE FORCE!

This month Andy Smith takes to three wheels, dons his football boots and takes to the rapids in an old inner tube (!) to bring you the latest and best in arcade action...



LAST DUEL Capcom 30p

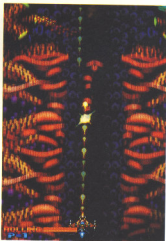
Capcom's latest offering's a one or two-player vertically scrolling trike-em-up. Bomb and blast your way through wave after wave, stage after stage of aggressive aliens using a joystick and two fire buttons to control your small viewed-from-above trike. You use the joystick to guide your trike over the continually scrolling roadway, with up and down affecting the speed of the scroll. It's a good idea to speed things up when things are quiet because you've also got a time limit to beat - fail to reach the end of the level and defeat the three end-of-level guardians within the time limit and you'll lose one of your three lives. The buttons are used to fire your front-firing gun, and to jump over obstacles (though it's doubtful you'll ever bother).

Other things to avoid are road-side obstacles and the holes in the road from which appear the swarming aliens. The road-side obstacles can be particularly vicious and come in two main types. Gun emplacements simply fire at you and try to blow you off the road, whilst the other obstacles attempt to grab you with tentacles.

You've got the almost obligatory extra weapons to pick up, each of which increase your firepower (you can get to the point that you've got so much weaponry you can race along the roadway with little to worry about). Once you come up against the end-of-level guardians, though, you're gonna need all the firepower you can carry - these babies are tough! Survive them and you're into the second stage. Here



One of the other extra weapons.



▲ Cutting a swathe through some vicious scenery in stage two.

◀ Tearing your way through the first stage. You've got plenty of firepower and a couple of drones so the going's easy at the moment...



The end-of-level guardians – two at once is no joke!

your trike changes into a plane and you're bombing and blasting your way through Salamander-style tentacles, Galaxian-style waves of descending aliens and Alien Syndrome-style end-of-level guardians.

Last Duel's a very standard coin-op – tough, good-looking and fun to play. But it offers nothing new and it's doubtful you'll be as addicted to this as you might be to say R-Type or Salamander.

FIGHTING SOCCER SNK 30p

Olympic football's the subject for SNK's latest game. The player takes charge of a complete footy team and has to fight through five tough rounds (playing against either the machine or a friend) before getting the chance to play in



The blue team try to scramble the ball away from the goal mouth. Note the arrow indicating the direction the ball will travel.

EXTENDED PLAY...

CHOPPER I SNK 30p

Helicopters are back in vogue and here's a game that lets you plot one through stage after stage of vertically scrolling enemy territory. Extra weapons take an additional twist in Chopper I – pick up one of the weapons and a group of fighter planes join in the fray firing Napalm bombs everywhere! This is about the most exciting feature of an otherwise very standard coin-op shoot-em-up.



TWIN EAGLE (Revenge Joe's Brother) Taito 30p

There are some marvellous examples of Japlish to be found in Twin Eagle, including the immortal legend 'Warning! Enemy Fighters Coming up!' The game's much like Chopper I – your helicopter's viewed from above and the screen scrolls vertically. The game has nice graphics and sound but little to make it stand out from the crowd.

RALLY BIKE Taito 30p

Here's a vertically scrolling, viewed from above bike-em-up. Avoid the other bikes and try to stay on the twisting course – which changes for each

stage. You've no weapons as such but you can pick up drones. Manage to pick up the symbol for drones and you'll get a motorbike bolted onto either side of your bike – very handy for taking out the other bikes without damage to yourself.

TOOBIN' Atari 30p

Atari bring us the Tubular Dudes, would you believe! Bil and Jet take to their tyre inner tubes and go paddling down a downwards scrolling river, collecting empty cans to throw at riverside fishermen (Eat cans dude!) and going through gates for points. Watch out for branches floating in the water because a puncture can be a disaster! Fortunately patches for the inner tubes can be picked up at various stages in the game. Wacky fun that's well worth taking a look at.

THE NINJA WARRIORS Taito 30p

This sideways scrolling beat-em-up's the follow-up to Darius and uses the same three monitor long display. Use your dagger and throwing stars to fight off the security guards (and dogs) that are trying to stop you breaking into the Air Force base. Look out for it.



the Olympic final.

The action's all viewed from above and you've got a joystick and two fire buttons to control your current footballer. You've got half a dozen men on your team but only one under

your direct control at any one time. The current player's highlighted and a large arrow appears which indicates the direction the ball would travel should you choose to kick it. The direction of the ball can be changed by twisting the joystick, while the direction of your character is affected by moving the joystick to one of the eight standard positions. The control methods confusing to start with but gets easier as you get used to it. The matches don't last long and it's tough to beat some of the better teams – but it's great fun trying! ●



A fine example of Japlish!



The red team have possession (the white highlighted player's on the red team).

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GAMES WITHOUT FRONTIERS

Once upon a time it was just you against the Galaxians, but revolutions in communications technology are going to bring about tremendous changes in the way we play – and who we play against. Andy Wilton looks at the past, present and future of the communicating games revolution.

It's a fascinating prospect – an arcade game that spans a country, a continent or even the entire globe – and it's not so far away. If you saw the Air Warrior feature in ACE issue 9 you'll know that these games have already started in the States. General Electric run a multi-player flight simulator that can handle 100 phone-line pilots at once, and other companies are expressing a strong interest in the field. SubLogic's *Flight Sim 3* (reviewed in this issue's Screen Test) allows several players to connect up via modem and practice formation flying. Other games run over existing or custom networks, and improvements in communication technology could see these stretching out over high-speed phone lines or satellite networks over the next decade.

People can string together games over almost any sort of communication system. Ordinary letter post supports huge PBM games, a telephone system designed for human voice traffic carries streams of computer game messages – whatever next? Flight sims by satellite? Let's take a look at the development of communications technology for games players.

SNAIL MAIL

Postal chess is as old as the hills, but the current PBM (Play By Mail) trend probably stems from the far more recent boardgame *Diplomacy*. The shifting alliances and vicious betrayals of this ultra-cynical game (see ACE issue 5 for a review of Leisure Genius's PC version) depend on the large number of players involved – seven for a



The past...and the future? One small step for comms technology, one giant leap for gameplay.

full game – but getting so many people in one place can be extremely difficult.

The post provided a neat way round this, but also raised for more interesting possibilities. If the Royal Mail lets you run a game that's inconveniently large for a living room, why not set up a game you couldn't possibly fit in a house? With hundreds or even thousands of players in one game universe, the interplay reaches heights that a single-player micro game couldn't hope to match.

Of course, PBMs are only as fast as the post, and that isn't always very fast at all. You could speed things up a bit using fax machines if you wanted, but the logistical problem of reading and reconciling orders (and actually getting them all printed out) would then rear its ugly head.

E-MAIL

With large online networks providing electronic mail facilities, it was only natural that these should be turned to entertainment purposes. At first the games were just higher-tech versions of PBM, with users exchanging Chess or Diplomacy moves by mailbox. The networks themselves weren't slow to see the possibilities here: in particular, electronic PBM forms can be read and reconciled by computer, thus solving a major admin headache.

NETWORKS & PHONE GAMES

For more exciting things are afoot than postal or pseudo-postal games. For some time now there's been the technology to get a whole load of people playing the same computer game by means of networking. Rather than having everyone play on one micro (as in Spy vs Spy or Leatherheads, for example) or on two micros linked back to back (as in PC Falcon or Amiga Flight Sim II), the idea is to use a large number of micros all exchanging information with each other or with a central host computer.

For a networked game to really catch on, the network it runs on must already be in use for other purposes. Hardware's the important factor here: setting up several machines close together, connected with special cables, is a lot more effort than most people will go to for a game.

The problem doesn't exist in the same way on phone-line games because the micros involved don't have to be close together and may well already be connected to modems. In any case, console equipment is more or less standard so the same hardware set-up could access several different phone games.

BLURRING THE BARRIERS

Computer networking may be a big issue now, but in a few years time the term might not mean very much. On the cutting edge of technology the buzzword now is distributed processing – the idea of linked micros not only exchanging information but actually sharing processor power. Distributed processing is one of the underlying concepts of Pethel's Transputer-powered ABAQ workstation, and we can



The multi-storey ABAQ motherboard.

expect to see a lot more of it in the next few years.

A distributed system is made up of machines any one of which can operate on its own, but the whole set-up actually behaves more like a mainframe with terminals. The potential advantages of this kind of set-up are enormous, and not just for the sort of practical task most present-day networks are aimed at. Anyone writing games for a distributive micro would probably want to allow not only for the availability of extra power, but also for more than one person playing the thing at once.

HIGHER SPEEDS

The main limiting factor on the sorts of games you can run down a phone line is the data speed required. With conventional lines in the UK, you can't send information reliably at much more than 1200 bits per second in each direction. That's no problem as far as outgoing information from your micro is concerned – it's easy enough to let the host computer know what you're up to – but it's a severe limit on incoming data. You see the host has to tell your micro about every other player in the game, and with a 100-player game that's acceptably responsive this could involve an enormous amount of data. In practice the upper limit with today's technology would probably be around 16 players at any one time.

Changes are afoot, however. British Telecom are currently introducing a digital phone network that'll stand computer communications on its head. The system is known as the Integrated Services Digital Network (or ISDN for short), and it's already operating in the Silicon Valley triangle of South-East England, and in most of the UK's major cities. What will the changes mean to home users? Well, the details haven't been worked



Don't get the idea that all this is brand new: programmers have been seeing the possibilities of multi-player action and intrigue for some years now. Look at these real, up-and-running games as they progress from split-screen spying to online network aerobatics. It's all happening!

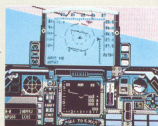
SPY VS SPY

Violently competitive two-player games can trace their ancestry back at least as far as the Atari console classic Tank Pong, but Beyond brought a whole new idea to the genre with this split-screen spy-em-up. Straightforward ambushes clearly weren't going to work – you could simply look at your opponent's half of the screen to see where he was hiding – so booby traps were another matter. The game offered you an exotic range of lethal gadgets to plant in your opponent's path (as you might expect from the original Mad comic strip) and he was usually too busy himself to watch where you were putting them.

PC FALCON • FLIGHT SIM II ET AL

Though a very impressive flight simulator in its own right, this Spectrum Holobyte title had a lovely bonus in the form of a two-player option. With two PCs back to back, a pair of Falcon fans can dogfight not with computer-controlled MIGs but rather with each other's F-16s.

There's not quite so much point to Amiga Flight Sim II's interface option, simply because it's not a combat game so the two players can't fight each other. That said, there is the big advantage that the connection can be routed through a modem and down a phone line.



PC - Falcon

Want to go flying with a friend several hundred miles away? No problem!

MicroIllusions' two Amiga titles Firepower and Galactic Invasion (as reviewed in ACE issue 10, p55) can both be set up for two-machine, two-player use down a phone line. The Hayes modem protocols used make this option largely irrelevant for UK modem owners, unfortunately.

These four games illustrate a couple of important points. First, multi-machine gameplay can be an awful lot of fun; and second, even over the phone these things can be very difficult to set up. The enormous advantage of a large network like Compunet or Micronet over these one-off 'user to user' arrangements is that it's so much easier finding an opponent when you're in the mood for a good blast.

MIDI MAZE

Two player games are all very well, but they leave no room for alliance and very little for surprise. Getting more people involved can be

MULLA

out yet but you can expect considerably higher data speeds and much greater reliability within the next five to ten years.

Though a digital phone system is great news for all comms users in the medium to long term, it's only a partial solution to the games bottleneck. Hundreds of players and complex control options would probably still be beyond a domestic line's capabilities. Perhaps the answer is to look outside the phone system – and the atmosphere, come to that.



SATELLITES

As we've already seen, conventional phone lines are perfectly adequate for the data your micro needs to give the system

host. The bottleneck is on the information coming the other way but, crucially, the data the host needs to send to your micro is the same as the data it needs to send everyone else: namely, details of what each player is doing. Since the info's the same for everyone, and phone lines aren't fast enough to handle it, the obvious solution is to broadcast the details of player move-



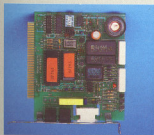
As seen on TV, British Telecom's changeover to a digital phone system proceeds apace. Here, a dish is hoisted into position high up on the Telecom Tower.

MULTILAYER IN THE FLESH

very difficult: user-to-user phone arrangements are no good unless you've got two phone lines apiece – not to mention two modems and two RS232 ports – so most people fall back on some sort of local (ie direct cable) network.

With its striking combination of cuteness and violence, this Hybrid Arts shoot-em-up has done a good deal to bring these local network games into the public eye: small wonder given its strong graphics, camera options and marvellous 'Kill a happy face' slogan!

The game uses up to 16 STs linked in a ring network via their MIDI In and Out ports. Because this set-up is completely nonstandard, MIDI Maze is inconvenient to play – you're certainly not going to have a casual game at any rate – but the results are worth the effort. Charging round a maze blasting away at happy-faced blobs may not sound too taxing, but there is a definite tactical side to things and – crucially – the human angle gives the action a real edge.



Anadrom 1200 PB5 modem card – for the IBM PC

NET TREK

An outstanding example of games that use existing hardware set-ups, this real-time shareware game runs on the standard Macintosh network. AppleTalk. It's based on those creaky *Star Trek* games of old – no relation to Firebird's licensed offering – but the multi-player angle and some very slick programming make it worthwhile stuff.

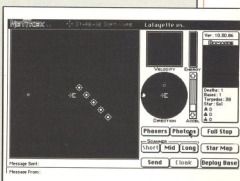
Choose your vessel – either a Federation starship, Klingon battlecruiser or Romulan 'Bird of Prey' – and boldly go forth into an eight-system galaxy. Your aim's to build a base in each system before any of your opponents. In practice this is difficult almost to the point of impossibility, but that hardly matters: with tough controls, terrific sound effects and up to four opponents at once, the playing's enough fun in its own right.

AIR WARRIOR

(See ACE issue 9 pp40-41 for more details.)

A milestone in computer gaming by anyone's standards, this multi-player combat flight simulator runs across the United States and Canada. Individual players log onto General Electric's online database GEnie by standard phone lines, using special combined comms/simulator software. Once you're airborne your own micro displays the out-of-cockpit view – in solid 3D – and generates sound effects, while GEnie's mainframe coordinates your movements with everyone else's.

There are so many remarkable features to



Air Warrior that it's hard to know where to start. It's a big game – up to 100 people can play at once – and runs on an established network (using surplus processing power, in fact). It's not restricted to one machine: Macintosh, Amiga and ST owners can all join in, with a PC version in the offing too. It allows teaming up either for bomber crews or fighter squadrons, and combat with rival game-nations.

Probably the most remarkable thing of all is that *Air Warrior*'s one of a kind. There's still no similar real-time game in the States, and no sign of one this side of the Atlantic either. Some estimates put as many as a quarter of a million modems in this country, so the first mainstream entertainment use for the things – which *Air Warrior* surely is – can only be ignored for so long.

ments and actions.

Sounds fanciful? Well, it isn't. The satellite revolution is already coming to Europe, and with the humbling price of receiving dishes – watch out for Amstrad's price-busting dish on a skyline near you! – satellite signals could soon be one of the cheapest means of sending mass data. By bouncing its outgoing data off a geostationary satellite, the host opens the comms bottleneck up wide enough for not hundreds but thousands of players.

THE OUTER LIMITS

If games don't even stop at the outer edges of the atmosphere, that doesn't mean they're absolutely unfettered. At any rate, gameplay across the galaxy is unlikely to ever be feasible. You could send a Mac with Air Warrior software, a modem and communications equipment out on a Voyageur-type interstellar probe but it wouldn't get you very far. Even if it was found by aliens who could read English, and even if they could understand the concept of aerial combat, they still couldn't play. At the speed of light, the round-trip time for one alien control movement and the GEnie host's reply would be at least eight years – and that's assuming there's intelligent



English-speaking plane-flying life in the nearest star system to us, Proxima Centauri!

This isn't quite as frivolous as it sounds: even within the confines of the planet, communication delays caused by the light barrier could become significant. The same round-trip time for an Australian player's messages to a UK games host computer would be over a tenth of a second, and that's within the limits of human reflexes: in other words, the antipodean gamer could be at a noticeable (but very slight) disadvantage!

COMING SOON

Now that you've checked out the games that already talk to each other, the games that easily could and the technology behind the whole field, ask yourself this: if you could play a game with hundreds of other real human beings, co-operating or competing as the balance of power shifted, with state of the art graphics and responsive controls, wouldn't you buy a £100 modem? And if you don't even need a modem to go online in five years time or so, wouldn't you get involved then? Look at it anyway you like, this has got to be the face of games for the Nineties – and what a decade it'll be! ●

MULTI-PLAYER UNDER THE SKIN

Is all this technology only just catching up with what arcade games have been doing for years? Take a look at these, and ask yourself if some of the most influential computer and coin-op titles aren't really multi-player games in disguise.

PONG

The grand-daddy of all arcade games, Nolan Bushnell's classic bat-and-ball game was a two-player effort mostly, one suspects, because that was the easiest way of doing things. (Anyone remember it cropping up as the final-round competition on *Crackin' Jack*?) Pong did well for Nolan's fledgling company Alan, but the single-player sequel *Break Out* did far better. Whether this was down to *Break Out*'s greater complexity and better game structure or just the age old multi-player problem of finding an opponent, the video game as a man vs machine contest was seen as the way ahead.

SPACE INVADERS ● DEFENDER ● SCRAMBLE

When coin-ops pulled out of the post-Pong lull, they were single-player with a vengeance. In *Space Invaders* and the shoot-em-ups that followed, there was only one point of view a player could have: the lone, heroic pilot. Putting humans in control of the massed enemies just wouldn't make sense. The games were based on inequality, and the heart of the inequality was that the bad guys were extraordinarily stupid. The invaders plodded down the screen like redcoats marching into a tank battle. Who on Earth would take on a cannon-fodder role like that? Even *Missile Command*'s smart bombs, the Einsteins of the invader scene, were fish in a barrel compared to a human opponent.

TRON ● BATTLEZONE ● POLE POSITION



Battlezone

While the games mainstream pitted human players against a million and one bubble-brained aliens, a few titles offered the far greater chal-

lenge of competition on equal terms. Sometimes this meant very simple two-player action with the competitors both appearing on one plan-view screen – *Tron* and *Tank Pong* are obvious examples here – but more interestingly it could also extend to taking on a few well-equipped computer opponents.

In *Battlezone* the bad guys had tanks, very similar to yours, and you won or lost on reactions and tactics alone. *Pole Position* wasn't quite so clear-cut, since your racing car always took the damage in a crash no matter who caused it. Be that as it may, both

of these games could have been the basis for networked real-time games – if the coin-op companies had thought it commercially viable, that is.



ELITE

If games like *Battlezone* were in a sense multi-player games with micro-processors for opponents, that was doubly true of

Elite. This vast space combat and trading game went out of its way to make the player feel like just one of many, in a game structure that owed him no special favours. Combat was tough, and until you'd really learnt the ropes you could quite easily die in a one-on-one dog-fight.

That was not all. *Elite*'s trading structure suggested market prices that fluctuated with supply and demand: with enough players buying, selling, using and destroying goods, these market forces might well arise naturally.

Though technical strength may have a lot to do with *Elite*'s success in the shops, it's a fair bet that the game's multi-player feel also sold a lot of copies. And that in turn suggests how popular a truly multi-player online version of the game would be.



HEAD OVER HEELS

Intriguingly enough, this Jon Ritman/Bernie Drummond epic has the core of an amazing multi-player game even though it's very definitely a one-man show. Time and again, obstacles require careful 'co-operation' between the acrobatic Head and his athletic counterpart Heels. Imagine how interesting this could get if Head and Heels were controlled simultaneously by separate people!

In the room illustrated, Head ferries Heels across to the far side of the room and then Heels returns the favour. Suppose that Heels could accept the lift across the kiling floor and then charge off on his own, leaving the hapless Head on this side – or worse still, stranding him halfway across! Would it benefit him in the long run? Would Heels need Head's help later on? Could Head avenge himself?

That's just a two-player example. With 16 cute, cuddly players in a castle, the problems could be much larger and the potential for interaction much greater. Beginners might need to team up to tackle obstacles that experienced players could manage single-handed. Large teams might break into rival factions where there's not enough treasure to go round, or where obstacles limit the numbers who can get past (by trap doors, disappearing blocks or whatever).

STARGLIDER 2



At the beginning there was a void, a blank
factory without form or purpose.

And ARGONAUT Software looked upon the void
and said...

LET THERE BE FLIGHT!

...and there was STARGLIDER.

And as time progressed, the art of three dimensional
solid graphics became known unto the
ARGONAUTS, and they rejoiced.

And they said...

**LET US CREATE THE ULTIMATE
PROGRAM TO HAVE DOMINION OVER
ALL OTHER PROGRAMS IN THE
UNIVERSE!**

...and there was a blinding light and the Earth spat
fire and trembled.

And as the fire diminished and the vapours cleared,
the fruits of their labours emerged from out of the
chaos.

THE ULTIMATE CREATION!

STARGLIDER 2...

**...A VOYAGE INTO THE THIRD
DIMENSION.**

BY ARGONAUT SOFTWARE

Atari ST/Amiga £24.95



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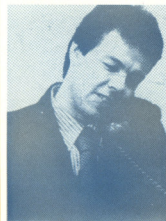
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First onto the bandwagon are Big Apple. Big name...big company...fat wallets...but what's behind the hype, and what games are they going to be thrusting under our noses?

To start with, they've got some strong backing, namely their parent company Prestwich Holdings, whose 25 or so companies (who range from Quill cover manufacture to video distribution and character licensing) managed to turn over a whopping \$42m last year. To get the apple rolling Prestwich have set aside \$5m for the first year, of which some \$400,000 has been set aside for advertising.

Big A are hoping to bring a little piece of New York into the homes of games players country-wide with the introduction of their three new labels. Top of the range games will be released under the title Broadway games - these are likely to be 8-bit products



FIGHTING TALK...

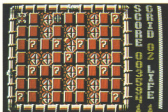
'There's always room in the market for another trader - and if established houses ain't doing it right, they'll suffer.'

HOT

Nexus have bitten the dust, Piranha have gone to the wall, and small independents are feeling the pinch - but new software houses are still moving in for the kill. Just who do they think they are? And have they got what it takes to succeed where others have failed?

that Terry Ashton describes as something special. At the cheaper end of the scale there will be the Brooklyn range of original budget titles. 16-bit owners haven't been forgotten either because most of Big A's games will be converted and released on the Manhattan Transfer label. Curiously, only a couple of the forthcoming titles will be written specifically for the larger machines.

Whether we'll see one of Big A's first ventures in licensing on the 16-bit machines remains to be seen, but you can bet your bottom dollar 8-bit owners will soon be able to thrill at the sight of a computer game full



Big Apple's Oop!

of those cute 'n' cuddly Californian raisins (you know, the ones from the T.V. ads who are so smooth?) It seems the raisins, stars of this first dried fruit-em-up are to compete in their own Olympics where events include racing up the grapevine, jumping over breakfast bowls and pepper pots etc. It all sounds a bit wacky, but if Big Apple can keep up and improve upon the standard set by Oop! Then games players should have something to look forward to.

Terry Ashton, Big A's M.D. hopes his first twelve titles will collectively sell some 250,000 units across the five formats (ST, Amiga, PC, C64 and Spectrum). Amstrad CPC owners won't get a look in though, unless another company wish to do the conversions.

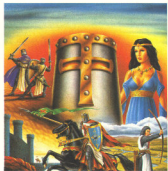
GALLIC INVASION

French software house Ubi Soft certainly know how to treat the members of their development unit - they house them in a 19th century chateau surrounded by 700 acres of grounds and woodlands. It was to



A nice place to have to work? (It's a bit of a trudge to the chippie and back every lunchtime though...)

here that Ubi Soft recently invited journalists from as far afield as Finland, England, Italy, Sweden, Spain and Germany to see their new range of games (and enjoy the odd drop of the bubbly stuff) that they're gearing up to release across Europe.



Iron Lord

HOUSES



Title screen of *The Kristal*

Ubi Soft were founded in 1986, and have released some 20 titles across a number of formats. Even so, they've made little impact on the European scene as a whole (who remembers *Zombi* on the CPC?). Company

President Yves Guillemot reckons that's all about to change with the release of their next half a dozen or so titles. Flagship of the Autumn range will be *Iron Lord*. The game's set in the age of chivalry when the Lords of the Kingdom of France reigned over a great number of vassals and lived in fortified castles (and wore chain mail under-pants and rode around knocking people off horses with great long pointy sticks). As a young knight you're out to seek your fortune in this

We are now ready to launch properly into the British market because we can release our products on all formats - including the Spectrum. Surely the French don't still think of us as a nation of Spectrum owners?

adventure-type game, which is full of arcade sequences such as arm-wrestling, archery and sword fighting. Other titles we're likely to see are the Gauntletish *Putty's Saga* and the graphically stunning *B.A.T.*

Ubi Soft are hoping the European sales off these new titles will help bump their turnover up from some \$5m last year to \$10m this year. That's not too unrealistic either when you consider Ubi Soft are BIG distributors in France - handling such



Two of *The Kristal*'s approximately 30 characters.

esteemed software houses as Electronic Arts, Miramax and Elite.

VETERANS...

One of the oldest British software publishers is Prism Leisure - they're the people behind *Addictive* (of *Football Manager* fame) and *Endurance Games*.

Prism have been around for some six years and have, up till now, kept a fairly low profile. That could all change over the next few months as Prism release their next few games - first out is *Addictive's Football Manager 2*. The game was a tremendous



Maxwell Technology's *Hotshot*.

success in its 8-bit formats and now 16-bit football management fans will be able to join in the fun. Prism firmly believe in the strength of the 16-bit scene and are gearing up to launch a three-disk Amiga game called *The Kristal*. It will be released under the *Endurance* label and is based on the stage musical written by Michael Sutin, Rodney Wyatt and Mickey Keen. The game's a mix of arcade and adventure elements and features some 60 stunning backgrounds.

Also from Prism will be several games produced by Maxwell Technology, the company formed by John Maxwell (ex-Mastetronic) and David Jones (creator of the *Magic Knight* series of games), who's first offering looks likely to be a game called



One of the backgrounds from *The Kristal*.

Hotshot. Released under the *Addictive* label, *Hotshots* a wacky simultaneous two-player game with a couple of *Breakout* features and a lot more besides. Richard Hennerley (Prism's P.R. Manager) is confident Prism are going to continue to be a major contender in the market place over the next few months, and if the versions we've seen of *Hotshot* and *The Kristal* are anything to go by, he could well be right.



Prism's P.R. Manager Richard Hennerley outside the Prism offices

'I feel there's few people about with original ideas or product - the market's become a bit staid. There's a hole in the market that anyone with original ideas and product and can back them up should be able to fill.'

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COMPILATION
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5 HITS FOR
THE PRICE
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THE STORY SO FAR... The evil sorcerer Drax has sworn to wreak an unspeakable doom on the people of the Jewelled City unless Princess Marilana is delivered to him. However he has agreed that if a champion can be found who is able to defeat his demonic guardians, the Princess will be released. From the wastelands of the North, comes an unknown barbarian, a mighty warrior, wielding his broadsword with deadly skill. Can he vanquish the forces of Darkness and free the Princess? **ONLY YOU CAN SAY...**

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You are racing in the world's craziest race - The American Cross Country Prestige Cars Race. This race is over three tracks throughout the United States: Arizona, Florida and the N.A.S.A. If you are able to complete the race before the time runs out, you will get a faster car. You start with a PORCHE 911 Turbo Better than average drivers will receive a LAMBORGHINI Countach, and only the world's best drivers may drive a FERRARI GT0. **PREPARE TO START. READY? GO!!!**

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The game where the nice guys don't get a look in. Grab your way through Chicago punch up New York, and jump on San Francisco. Three indescribably nasty characters which bear a remarkable likeness to King Kong, Godzilla and Wolfman, need you to send them on a rampage in an enduring 150 days of destruction, through 50 different cities.

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JUMP INTO THE WORLD OF ENDURO RACING... Based upon the popular arcade coin op, ENDURO RACER has been described as "THE MOST FAITHFUL AND COMPELLING COIN OP CONVERSION SEEN" (Sinclair User) and "THE BEST COIN OP CONVERSION AVAILABLE" (Popular Computing Weekly). From tarmac tracks to desert trails ENDURO RACER is a stunning motorbike race pitting you against time as you compete with deadly opponents and the cruel and challenging terrain...

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The evil Zark and his ho sprites have moved in to eliminate the spectrum. render all landscapes di grey. So jump in your transporter and with the of your faithful servant Catellite restore Wizworl its former glory. Collect for special effects as you manoeuvre to shake off alien forces. Stunning graphics create the mood for a th and compulsive game w hordes of hidden featur extra controls.

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THE PROFESSIONALS

PART ONE

CODING

What exactly goes into a game? What goes on behind the scenes at Britain's biggest software houses – and can YOU join in? In the first instalment of an epic series, ACE takes a look at people who spend all day messing around with computer games – and get paid for it!

This month, just to get you in the mood, we're going to take a look at the real shock troops of the games world – the designers and coders. They may rely on others to provide the graphics, music or sound effects, but these really just bolt onto a framework of gameplay ideas and code. It's this game core that entertains – or doesn't, as the case may be – so it's these people's work that's crucial to a game's success.

In the good old days, a game was normally a one-man effort. The same person designed the game, drew the sprites, composed the music and wrote the code that implemented all three. Not content with all that, the very same person might then produce the inlay art, organise the duplication of tapes and market the finished game by mail order!

Nowadays, things are far more specialised. Sprite artists create graphics for a game they won't code using utilities they didn't write, while programmers work to the game designs of people who don't actually know how to program. It's a sign that the industry's maturing, and it means that even if you never master machine code, you're tone deaf or you can't draw to save your life, you could still find a niche for yourself in the games business.

THE TASKS

The norm is still for the same person to code and design a game, or for the design to be shared between the coder and one other person – often the game's graphic artist. The big advantage of this kind of approach is that the coder can tailor the design to what he knows is possible. Tales abound of software houses specifying game features that the micros concerned physically cannot manage!

Games designed entirely by non-pro-

grammers are rarer beasts for a number of reasons. For one thing, most programmers have ideas of their own which they'd like to build into games they're working on. For another, you can't produce a design for a technical masterpiece without some sort of programming background: there's no point specifying incredible graphic effects like those in *Zarch* or *Nebulus* unless you know they're possible, and that takes a good deal of coding knowledge.

CONTACTS ARE VITAL

As with all businesses, in games creation it's not just what you know but who you know. 'Contacts are vital' says Verminator designer and graphics artist Nigel Brownjohn. They give you much more flexibility. If you don't know anyone in the business, you'll just be stuck in a corner.

Friends in the industry can help you in loads of different ways. For coders the dividends are particularly high: most of them are

HARD GRAFT

Andrew Hewson, head of Hewson (nee Hewson Consultants, reputedly the UK's oldest surviving games software house).

'The thing people don't realise about games programming is how hard it is: it's far more difficult than it seems.'

'People write some bits of code at home, get a few shapes moving around on screen and think 'Hey, this is easy!'. They totally underestimate the amount of work that goes into a game.'

'When you've done what you think is 90% of the game, you're probably only about halfway through. People dismiss things they don't really know about. 'Sound effects? That won't take more than a day or two... Music? That won't take long either... Graphics? Those'll be easy...'. Now sound effects actually take a week or two, music's more like three weeks and as for graphics, those really do cause problems: you've got to leave space for them, and negotiations between graphics artists and programmers over this can get very tricky.'

'Once you've got everything working on the first few levels but you're committed to giving the game at least eight, you get problems again there. You start running out of memory so you've got to compact all the data down, and that takes time. And even when all that's done, it takes something like three weeks to get the difficulty tuning right.'

'Creating a game takes months of hard graft, but it's a lot of fun too. I'd definitely recommend it as a career for anyone who's interested: you can't see more than five years ahead in this business, but there's plenty of work to go round for that long.'





Nigel Brownjohn



Verminator

'EXPECT £10-£15000...'

Just how much cash is there in programming? Software houses are very reluctant to talk about sums of money on the record, but here are a few pointers from the people who sign the cheques:

Programmers and other software professionals are paid either a fixed sum or royalties. Authors or designers of original games usually get royalties – including royalties at a lower rate for versions converted by someone else – while conversion programmers and others will more likely get a fixed sum.

Royalties vary considerably according to the type of game and the software house making the deal, but a typical goodish figure would be around 15% of the software house's nett takings (i.e. what they get back from sales, not what customers pay for them.) You can also work out some kind of tariff for fixed sums – at the ends of the scale, at any rate:

For an original ST and Amiga game to be sold at full price (i.e. £20 give or take small change) you could expect £10-15,000;

For an original 8-bit budget game, you'll probably get rather less than £2,000 from a quality house – or as little as a few hundred pounds at the very bottom of the heap.

The middle ground, and in particular the 8-bit full price market, is very unstable at the moment: some houses are holding firm here while others are losing confidence in the 8-bit machines. How well a game sells just seems like pot luck at times: 'It really is Russian Roulette', one software house told us.

Add this to all the other factors affecting the programmer's fee and it's small wonder that software houses disagree on what the going rate is. It does seem however that out of the £10 you might pay for a full-price game, the money getting back to the game's creators would be around the 80p-£1 mark. Do you still think piracy doesn't really hurt anyone?

self-taught programmers, but there's a great deal you can learn about the finer points of coding style just from talking to others. Books specifically on game-writing are very rare indeed, so (other than hacking other people's games apart) these technical conversations are the only alternative to re-inventing the wheel.

It's not just ideas or rules of thumb that other coders can pass on to you. Routines – crucial sections of code for doing frequently-needed tasks – often change hands between programming friends. If there's a lot of this going on within a circle of programmers it can save everyone a great deal of time – and time, for a freelance programmer, is quite literally money.

For a designer, the main advantage of contacts is slightly different. Selling your design talents to a software house can be pretty difficult if you're on your own: approach them as one half of a programming/design team on the other hand, and you're in a much stronger position.

But how are you going to build up those contacts in the first place? The best way is probably by working in-house at a software company for a while – Nigel did a half-year stint at now-defunct games house MikroGen – before setting yourself up as a freelance.

IN-HOUSE AND FREELANCE

There's no doubt about it: serving your time as an in-house programmer is a great way to learn the ropes. It may not pay terribly well, but while you're developing your own programming style and seeing how the industry



Conqueror

works you'd be hard put to earn a living for yourself as a freelance anyway. Software house boss Andrew Hewson reckons that in-house experience is invaluable for budding coders: 'You may think you're being given lousy work to do, mastering tapes and adding loading screens and stuff, but you actually get a tremendously broad base of experience from that kind of thing. Also you're seeing other people with game development problems that you'll probably run into yourself later on, so it can be a big help that way.'

The main thing you can get out of in-house work is a track record – a series of good (or at least competent) games that form a portfolio to show prospective clients. In an industry where you're measured mostly by what you can do, freelance commissions and advance payments go to whoever looks the most impressive on paper.

Both commissions and advances are vital to freelance success: if you have to produce games on spec and rely on selling them once they're (more or less) finished, you're headed for trouble two different ways. First, you'll have the cashflow problem of surviving until the game's finished, and that could easily mean two to three months without cash coming in.

Second, you could well be left with a game type that's badly out of step with the times: a Roadblasters or Fire and Forget style driving shoot-em-up might command a high price at the moment from software houses keen to jump on the bandwagon, but if you were to start writing one now it would probably look very dated by the time you'd got it finished.

If freelancing has so many headaches, why do it? It's really worth the hassle and insecurity? 'Yes, definitely,' maintains Nigel Brownjohn. 'It does pay better, but there's also the extra freedom and that's very important. If you work in-house you can be landed with incredibly awful dead-end projects and you have to work on them, but as a freelance you can pick and choose.'

HARDWARE NEEDS

Whatever skills you may have, you won't get very far as a coder unless you're properly equipped. For starters of course you'll need the micro you're coding for – the target machine as it's known – but you'll also need a development machine to actually type your program code into.

You could type your code in and test it on the same machine, but this slows things down very considerably. At the simplest level if you've got to quit from your development tools, run a game test, reset the machine and reload your tools again, you're obviously wasting good coding time. These days there's rather more to it than that, mind you.

It's a statement of the obvious, but games micros are designed fast and foremost to give good games performance. They don't necessarily have the high-quality keyboards, 80-column screen displays or fast, capacious disk drives you'd want your development machine to have. In the case

IN PERSPECTIVE

If the sums quoted sound absolutely vast to you, bear in mind that these are for original games – very time-consuming things to program – and that the £10,000+ figure might well involve four or five months' work including some very long hours. Also remember that the people getting these sums are self-employed, with all the vulnerability that implies: if the software house fails to pay up, they'll have to go to court; if the software house goes bust, they might not get paid at all; and if they're late with the game – even through no fault of their own – they may well lose large chunks of that fee in penalties. David Braben might be heading for the millionaire bracket thanks to Elite and (we at ACE would wager) Virus, but most games programmers in the UK won't be buying Porsches this year.

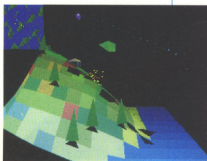
of the 8-bit machines, they're often not fast enough at development tasks.

The main time-waster here is assembly – a vital preparation step that turns a human-readable program into one that the target micro can run. Assembling an average-sized Spectrum game could take several minutes if you're developing on a Spectrum, but an ST might do the same job in just a few seconds. This process of assembling a program on one type of micro and running it on another – properly known as cross-assembly – can speed things up enormously.

If you're using a cross-assembly system, you'll usually need additional hardware to let you transfer the assembled game code over to your target machine. With some combinations of development and target micros you could just pull the program disk out of one drive and into the other – buzzword fans might like to know that this system is called a sneaker-net – but a more normal set-up would involve sending the code down an RS-232 cable.

Again, experience as an in-house programmer can count for a great deal here.

There's no substitute for learning the good and bad points of a system before you plough your own money into hardware: even if you don't like the set-up the company uses, at least that should give you pointers on what to look for. Also, of course, the salary from your in-house stint could well provide the cash for that freelance equipment! ●



Zarch

THE GOING RATE?

Herbert Wright of Logotron, and formerly Telecomsoft.

'You can go for a royalty deal and get an advance on the royalties, or you could go for a lump sum – though that's usually just for conversions, or games where the software house hands you a complete specification to work to. Normally you won't have to return any of the advance, even if the game flops and the royalties fail to cover it. Software houses would only normally specify a returnable deposit if you didn't have a track record, or had a history of delivering late.'

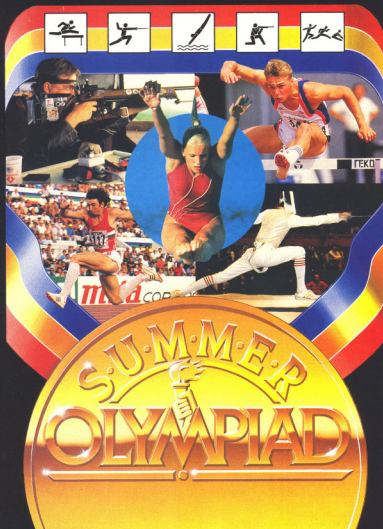
'For a single format 16-bit game, we wouldn't normally pay an advance or lump sum that ran into five figures. That doesn't mean that we never do, but the alarm bells start to ring when we get that high. We're talking about a good game too, for this kind of money: the sort of thing that would get 750+ in an ACE review.'

'If somebody comes to us with a game, we'd ideally like to see a completely finished product. We're also quite happy to look at a complete specification for a game, along with a demo of some aspect of it so that we know the people are up to the task: for example, if you came to us with an idea for a vertically scrolling game we'd want to see a spec explaining why this would be the best game ever, and a demo of some really good scrolling routines.'

'We'd also be interested in a spec on its own, if it was brought to us by someone with a really good track record. If it was brought to us by an unknown, we'd be unlikely to accept it – and if we did, it would be on a very low advance or royalties only. It would be a much bigger risk, you see.'



SUMMER RELEASE



The sequel to the hugely successful No. 1 from Tynesoft Winter Olympiad 88 - with five graphically stunning events and unbelievable playability.

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SCREEN TEST

We're a hard bunch to please when it comes to games and don't give away 900 ratings lightly. In fact this month we haven't been able to bring ourselves to give it to any of the new software. Boy, though — were there some near misses...

Helter Skelter from the programmers of *Impact* is a marvellously playable game featuring a bouncing ball trying to stomp a few monsters. There's *Flight Simulator III*, a glorious-looking program on the PC — but is it just a game?

It's been a special month for Updates, with a horde of new versions needing to be looked at in light of what went before.

Not forgetting a tough road race between *Roadblasters* and *Fire and Forget*. Then there's *Night Raider*, the *President is Missing*, *Sky Chase*, *Where Time Stood Still*...well go on, get reading.



THE RATINGS

HOW they're calculated...

If you buy a game, how much enjoyment will you get out of it, and for how long? Just check out our revolutionary PIC (Predicted Interest Curve) for the full story. Brilliant arcade games start high on the curve, and then steadily tail off as you lose interest; powerful puzzle games may ride the crest of the curve for months — but the moment you solve them they'll come tumbling down; complex strategy games may stump you at first — but climb up the scale as you begin to appreciate the scope of the gameplay. And as for the turkeys — they start low, stay low, and have nowhere to go but down, down, down.

Once you've seen how long the game can hold your attention, all you need to glance at is the renowned ACE RATING. This is calculated according to the area under the PIC. The bigger it is, the better the game. Add to that our definitive ratings for IQ Factor (will it give your brain cells a work-out?) and Fun Factor — a measure of instant appeal and exhilaration as you dive into the game. And, of course, we rate the Graphics and Audio effects too...for EVERY machine the game's available on.

WHY you can rely on them...

The ACE reviewing team covers a broad spectrum of computer entertainment talent. Andy Wilton — ACE's resident technical wizz — is as handy with a smart bomb as he is with hexadecimal. Andy Smith wouldn't know hexadecimal from a hole in the ground, but can wipe the floor with any number of aliens. Rod Lawton prefers to reason with aliens — then shoot them. Bob Wade (ex-Personal Computer Games, Zzap!64 and Amstrad Action) has played more computer games than any sane person ought to. Add Steve Cooke (ex-PCG and formerly columnist for magazines ranging from Zzap!64 to *Your Sinclair*) and you've got age and experience as well as youthful enthusiasm.

Every game on the following pages has been seen by all of us. We compare notes, express differing opinions, and only then do we decide who's to take final responsibility for getting our views into print. What follows, then, isn't just a collection of casual comments, but the definitive ACE verdict on this month's software. We've checked it out — now you can too.

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PC (EGA) - The main screen shows Chicago (at an angle) as viewed from your cockpit, while inset windows show an outside view of your Cessna and a plan view of the ground below.



CESSNA fans will already know the drill, but the rest of you may have trouble coping with the concept behind this one. The name says it all: this is a simulator, not a game. If you want missile dogfights or Libyan bombing missions, look elsewhere. Sublogic reckon that learning to fly is a big enough challenge in itself, and after trying the program out or even just rummaging through its enormous manual you may be inclined to agree with them.

The simulation centres around the Cessna 182, a single-engine propeller-driven aircraft commonly used by flying schools. What you do with this hardware is very much up to you: there's the entire US of A to explore from your home field in Illinois, or the nearby skyscrapers of Chicago to fly round if you'd prefer a little local entertainment. First you'll have to master your aircraft however, and that's not a simple matter at all.

The number one problem most arm-chair pilots will have when coming new to the *Fight Sim III* Cessna is lack of power. Unlike the Eagles, Hamiers or Fighting Falcons that you might be used to, the

FLIGHT SIMULATOR

SUBLOGIC get in a spin

LANDSCAPES



Sublogic are very keen on modules - data files for extra planes, airports or whatever which can be loaded into their games separately - but their landscape disks take the idea one step further. The added map areas let you fly your Cessna or Learjet around Western Europe, including a fairly detailed UK; or Japan, complete with a snow-capped Mount Fuji; or anywhere else Sublogic sell a few games, presumably. The point is, these selfsame disks will load into *Jef* so that you can fly an F-16 over the home counties (or their Tokyo equivalent). Gimmicky perhaps, but fun!

ST - The F-16 from *Jef* grows the skies over the Severn Estuary, as its pilot sets a course for downtown Bath.

Cessna cannot sustain a vertical climb and can only perform loops or Immelmans after a suitable preparatory dive. In general, you can't throw the plane around without keeping a careful watch on your airspeed, nor can you rely on opening the throttle up to get you out of trouble. These may be statements of the obvious as far as (real life) amateur pilots are concerned, but they'll come as a rude awakening to anyone expecting afterburners or 9G loops!

Don't despair: if you haven't got endless amounts of power, you do have an instruction mode to teach you how to use what you've got. There's also a whole load of use-

RELEASE BOX

IBM PC Import only - prices vary
Other versions currently under development

IBM PC VERSION

The screen may update slowly, but terrific EGA and VGA options put *FS III* streets ahead of Falcon on graphics. Poor keyboard responses and a low frame rate make it all a pretty daunting experience, mind you, and you'll need a hard disk or similar to access the more advanced flying lessons.

GRAPHICS 8 **IQ FACTOR** 8
AUDIO 2 **FUN FACTOR** 2

ACE RATING 838



● PC (EGA) - Spotter and cockpit views as your Learjet zooms across San Francisco Bay, in the general direction of Oakland.

ULATOR III



● PC (EGA) - As your Cessna zooms over nighttime Chicago, the inset window shows a spotter plane view of your own aircraft.

ful flying theory in the manual, and a host of difficulty settings you can alter to give you as easy (or hard) a time as you want. And if that still leaves you feeling unsatisfied, you'll just have to switch to *Flight Sim III's* alternative plane - the Learjet.

As *FS II* devotees will already know, the Learjet has got power coming out of its ears. If anything, the wretched plane just has too much power: open the throttle up while in level flight and you'll lose control or break the thing up entirely! (One feature added since *Flight Sim II* means that, as with scenery, extra planes can be loaded into the game at a later stage - if Sublogic make them available, that is.)

In either plane, these are simulation options that make the *Flight Simulator* series

just about unique: radio navigation, night flying and even variable reliability - could you cope with an engine failure on final approach? - help keep things interesting even for the seasoned fliers among you.

Added extras include formation flying and crop-dusting exercises to try out your skills on, a powerful multi-player facility for organising phone-line air shows (or whatever) and a rather weak World War I air combat game - this last thrown in more for laughs than anything else. The real challenge is just building up flying expertise on a detailed and accurately modelled simulation, and that makes it very much one for the would-be pilots. Gamesplayers can probably have a lot more fun with one of the many combat-orientated games around.

● Andy Wilton

PREDICTED INTEREST CURVE



It's most fun while you're learning, but dedicated fliers will still be playing next year!

JET

UPDATE SPECIAL

ATARI ST ● Sublogic, import only (prices vary) ● ACE RATING 684
Amiga version reviewed
issue 10 - ACE Rating 684

Leaning strongly towards fun rather than realism, *Jet* has always seemed a bit flimsy next to its *Flight Sim* stablemate. The new ST version fails to escape this rut, its toy-like graphics and simple-minded gameplay once again making a poor impression.

To be sure, the lack of either *Interceptor* or *Falcon* on the ST leaves the game with far less competition than its PC and Amiga equivalents. That's just



as well though, because *Jet's* low frame rate and poor controls would make it easy prey for such big fish.

The gameplay's decidedly wobbly too. The aerial combat's about as realistic as *Afterburner* and rather less satisfying, while the lack of a proper out-of-cockpit view makes it hard to believe you're really in a plane at all.

While not really a bad game, this one falls a long way short of both *Sublogic's* and the ST's capabilities. Ground attack missions and loadable landscapes are no substitute for realism, responsiveness or believable gameplay.

● Andy Wilton



On this level the monsters and ball can wrap around off the top and bottom of the screen. This is terribly confusing at first, but as you get used to it is an asset in clearing up quickly.



Could you get down that stairway in six seconds? It's easy if you are good at damping the bounce - otherwise, no chance.



How about this for tricky. You've got to get maximum height and be able to kill the bounce if you're going to do this in time. Not to mention the tricky hops needed when you get near the monsters.

HELTER SKELTER

AUDIOGENIC tumble for ya'

REMEMBER the *Breakout* clone *Impact* that was ACE 900 Rated in issue one? From the same programmers - John Dale, Adrian Stephens and Spiny Norman - comes another game in which simple, addictive gameplay is the order of the day. Don't be fooled by appearances or simplicity though, because you'll

need your wits about you to cope with this one.

In structure the game is a lot like *Bubble Bobble*. You play a screen at a time, in which you have to get rid of all the monsters. This sounds easy - though of course it's anything BUT that. The thing you control to do these dastardly deeds is a bouncing ball.

However, it's no ordinary ball. Pressing the fire button will initially make it bounce, but what happens after that depends on whether the ball is going up or down. If it's going up another press on the button will dampen the bouncing action. If it's headed down the bouncing force is increased to gain greater height.

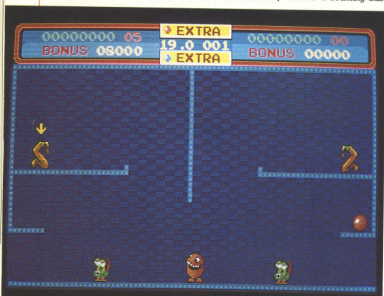
At first the control is difficult, but with a little practice the ball becomes very manoeuvrable - you can even stop it dead by a well-timed downward effect just as it's about to bounce up.

The only other things on screen apart from the ball are platforms and monsters. The monsters come in several varieties, but they all behave identically. At the start of a screen one monster will be highlighted by a yellow arrow. This is the one you have to bounce into, making it disappear. The arrow will then appear above a different monster. All you have to do is hit them in the right order.

If you hit a monster that isn't arrowed it splits into two smaller ones. These can't be further subdivided, but they move faster and make clearing the screen an awful lot harder - particularly if they are trapped in a small space. You see when you hit an arrowed 'twin' the other one immediately reverts to full size, and in a confined space you often can't help going into it again and creating another pair of twins...and so on.

The screen layouts vary in difficulty and it's pleasantly surprising the number of tricky designs that the authors have come up with. Each screen has to be completed within a time limit, bonus points being awarded for time left and for using as few jumps as possible.

There are a host of random objects that appear randomly on the screen for the ball



RELEASE BOX

ATARI ST	£14.95dk	OUT NOW
AMIGA	£14.95dk	IMMINENT
IBM PC	Under development	
8-bit versions under consideration		

◀ The problem here is getting the monsters in the right order. First you get the snakes on the left, then one of the ones on the floor, go back up for the other snakes, and finally what's left on the floor. Beware of splitting the snakes, though, or you'll be in trouble.



One of the worst screens of all. It's incredibly difficult to get up to those snakes and is complicated by it being virtually impossible not to split the monster at the bottom when you start.

to collect. If you can grab the spinning letters to spell EXTRA it gets you an extra life. Other bonuses are a level skip, extra time, time freeze, monster freeze, and a handy thing that makes all the monsters arrowed, and therefore vulnerable, at once.

As with Impact there is a screen designer. It's delightfully simple to use and you can knock up playable screens in no time at all. There are 80 pre-programmed screens and room for another 48 more. You can in fact program all 128 if you want to.

The other special feature in the game is the ability to have two players at once. There's a specially programmed block of screens that can only be played and completed by two players, while the others have shorter time limits for two. This means that not only do the players have to co-operate to complete screens, but they are also in competition for points.

It's hard to appreciate a game like this without actually playing it. It's got the sort of addiction that Breakout games and Bubble Bobble have. Throw in a screen designer and simultaneous two-player action as well and you've got something that's not only wildly addictive but can be kept fresh and interesting for a long time too.

● Bob Wade

ATARI ST VERSION

The graphics aren't going to get anyone excited, but you can fiddle around with them in the screen designer to get different effects. They do have a certain clean, stylish look though. The sound effects are of a similarly jangle quality to Impact and fit in quite well with the on-screen action.

GRAPHICS 5 IQ FACTOR 6
AUDIO 5 FUN FACTOR 9

ACE RATING 856

PREDICTED INTEREST CURVE



Looks unimpressive but gets you totally hooked. Once that has worn off the screen designer and 2-player mode keep it interesting.

This is an absolute beast of a screen. Start here and bounce off the top of the screen.

Land here and from the left edge of the platform get that arrowed monster.

Down to this monster next.



Here you should let the monsters come to you.

Stand here for the first one and then...

...move to here for the others.

This one is really easy. First you have to jump over the top for this one...

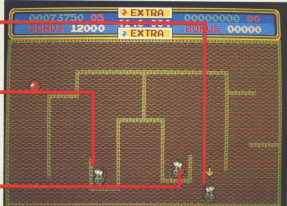
...then back over the top again for him...

...and finally over the top for a third time to get this guy. Precision jumping and speed are required if you're going to manage all that.



Repeat the process starting at this ledge to get the other two monsters. Get any in the wrong order and you'd better pray for a level skip because you won't manage it any other way.

4 This is awkward because the monsters are arrowed in a nasty order. First you have to get one from the right box, then the left, back to the right, and then left again. If you split an unarrowed monster while doing that you may find yourself desperately bouncing between the two boxes trying to eliminate everything - luck plays a part in what order they become arrowed after the initial mess up.



ROADBLASTERS

US GOLD put their foot to the floor

THIS is another in a long line of drive-em-ups in which you pilot a heavily-armed car doing battle with all sorts of moving and stationary hazards.

In this game you face other cars, motorcycles, roadside gun turrets, slippery patches and mines – together with fast diminishing fuel supplies. A gauge at the bottom of the screen tells you how much fuel you have left in your main and reserve tanks, and this can be replenished by running over the red and green spheres that appear in the road. Otherwise you have to rely on completing sections of the course to get refuelled. Run out before you reach the end and it's game over. Reach the chequered finish and you advance to the next, harder, level.

Study the control method, and you'll notice it is slightly unusual. Keep the car pointing straight ahead as you fly at luscious speed towards the next bend and you'll find the car stays in the middle lane regardless. You don't have to steer round bends at all. The only time you'll need to point the car in any other direction than straight ahead is when you want to change lanes or shoot something by the roadside. This seems a little unrealistic at first, but in fact helps the playability quite a lot.

To add a bit of depth to the game there is a collectable weapons feature whereby you can

aircraft descends towards you near the start of each level and drops a weapons pod onto your roof. To activate this weapon while driving, pull back on the joystick and fire. Beware, though, benefits such as the extra-fast firing don't last for ever, so use them only when you must. Get blown up, and your extra weapon is gone when you restart.

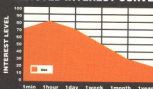
Roadblasters is nothing special graphically, but overall control and playability is good for this type of game. On later levels the gameplay gets quite tough, but not to the point where it becomes unplayable – and with fifty levels to get through you're going to have to be pretty determined to finish it.

● Rod Lawton

RELEASE BOX

C64/128	£9.99cs, £14.99dk	OUT NOW
SPEC	£8.99cs, £12.99dk	IMMINENT
AMS	£9.99cs, £14.99dk	IMMINENT
ATARI ST	£19.99dk	IMMINENT
AMIGA	£24.99dk	IMMINENT

PREDICTED INTEREST CURVE



Good control, extra weapons and steadily increasing difficulty add long-term appeal to an otherwise standard game-style.

C64 VERSION

Indifferent, graphically, with sparse sound effects but a pleasant tune between games. Control is actually quite effective once you get used to the slightly odd look of the game during play.

GRAPHICS 6 **IQ FACTOR** 2
AUDIO 6 **FUN FACTOR** 7

ACE RATING 654



MAIN PICTURE Well done - you've just reached the end of level 4. INSET The start of level 5.

COLLECTING cisterns may not seem the most glamorous occupation in the world, but it can prove one of the most dangerous when you're at the wheel of Thunder Master, the ultimate weapon.

The 'cisterns' actually contain Omega-Kerosene, essential fuel for your four wheel drive, triple-turbo car-thing as you charge across enemy territory blowing up tanks, mines, helicopters and bunkers – and getting blown up a few times yourself, for that matter.

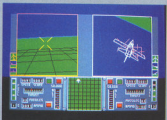
Choose the level you want to play on, pick one of six battle locations on a map of the world, and get ready to go. There is no relationship, apparently, between the triple-turbo V16 engine's appetite for fuel and the speed you're travelling at, so your best bet is to just charge along the twisting and turning roadway absolutely flat out to give yourself the best chance of reaching safety.

It's not easy to crash, but it is practically impossible to avoid getting blown up several times en route. The hazards come at you very fast indeed, needing superhuman reactions and large amounts of luck to avoid. Never mind, you can die as often as you like – it's fuel that's the important thing.

There is a two-player mode with Fire

AERIAL combat is a curious back-drop for Johann Sebastian Bach's Brandenburg Concerto No. 3 (sorry, we don't know which movement), but this jaunty soundtrack is the first thing to greet you in this one or two-player game.

The scenario is quite simple. You are flying one of several different jet aircraft over a flat green landscape marked with a grid, as is your opponent. The idea is to shoot him down before he gets you. Nothing more, nothing less. You get destroyed (depicted by a smashed windscreen) if you get hit by too many enemy bullets, an enemy missile, hit the ground or stray too far outside the grid.



Player 2's got your F-16 in his sights. Unless you can pull some pretty fancy aerobatics it looks like your number's up.

RELEASE BOX

AMIGA	£19.99dk	OUT NOW
ATARI ST	£19.99dk	IMMINENT

No other versions planned

FIRE AND FORGET

TITUS triple-turbocharged

And Forget, and it's one with a difference. The second player takes charge of a helicopter - the Thunder Cloud - which flies above the car. Take care though. The fuel cisterns come in green and blue varieties, and the Thunder Cloud can only fill up from the green ones. Contact with the blue cisterns will make it explode!



AMIGA - These enemy helicopters come and go in a flash. Surviving them is largely a matter of luck.

The game's animation is generally very good, and the impression of speed is tremendous, although attacking tanks and helicopters close in rather jerkily and are distinctly two-dimensional. In fact the whole gameplay is rather two-dimensional, because apart from steering and shooting there's really not much else to do. The graphics will get you playing initially, but once that's worn off there's little to keep you going.

● Rod Lawton

ATARI ST VERSION

Good graphics overall, if a little patchy in places. Sound is adequate with pleasant music. Glossy appearance, but rather shallow gameplay.

GRAPHICS 6 **IQ FACTOR** 1
AUDIO 5 **FUN FACTOR** 6

ACE RATING 618

AMIGA VERSION

There's little to distinguish this from the ST version. The graphics are impressive and the sound good, but there's little lasting appeal.

GRAPHICS 6 **IQ FACTOR** 1
AUDIO 8 **FUN FACTOR** 6

ACE RATING 618

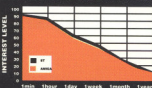
RELEASE BOX

ATARI ST £24.99dk **OUT NOW**

AMIGA £24.99dk **OUT NOW**

PC and 8-bit versions under development

PREDICTED INTEREST CURVE



A good, attractive blast, but too simple for much long-term appeal.

SKY CHASE

Get shot down by IMAGEWORKS

The screen is divided into two identical cockpit views, one for each player. Your instruments show you how much fuel you have, your altitude, attitude, thrust and speed. A rudimentary map shows the position of both you and your opponent.

This opponent can be either the computer - graded in difficulty from easy to ACE -

or another human. The computer opponent is no pushover, especially on the higher levels, but perhaps the true appeal of the game is in its two-player option, which really is terrific fun.

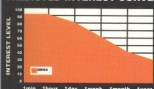
Each player can select his aircraft and armaments independently (you select both if you're playing against the computer).

though it has to be said that you're not going to notice much difference in flying properties between the aircraft initially. Don't try to put one over on the computer by giving it the paper dart...

Visually, Sky Chase has limited appeal, but as a combative dogfighting game it has little competition (but see the multi-player games feature this ish). It's a long way from a proper flight sim, has a minimal game area, no exploration or strategy element and essentially zero gameplay - but actually facing an opponent with BRAINS (human or otherwise) is arguably worth all of those.

● Rod Lawton

PREDICTED INTEREST CURVE



Once that tough computer opponent gets too predictable, there's still that great 2-player option.

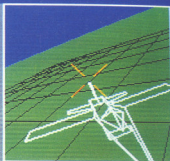
AMIGA VERSION

Elementary graphics, to say the least. They are fast, though. Sound is good, with competent effects and that curious - but jaunty - choice of title tune.

GRAPHICS 6 **IQ FACTOR** 4
AUDIO 8 **FUN FACTOR** 7

ACE RATING 785

MIQ 31 versus F-16 Falcon. At a closing speed of two thousand miles an hour neither side's got much chance to launch an air-to-air missile.



'HANG ON IN THERE....'

Atari ST screen shots shown.



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ARCADE ACTION

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Advanced Dungeons & Dragons

COMPUTER



Advanced Dungeons & Dragons[®]

COMPIPRODUCT

POOL OF RADIANCE

FANTASY ROLE PLAYING

Located on the northern shore of the Moonsea in the Forgotten Realms, the fabled city of Phlan had been overrun by monsters led by a mysterious leader. Your quest: discover the identity of this evil force.

Pool of Radiance adheres faithfully to the legendary Advanced Dungeons & Dragons[™] fantasy role playing systems. No detail is missed including 6 player characters; computer controlled non-player characters; the Adventurers' Journal packed with history, maps and clues and the Translation Wheel that converts Elvish and Dwarvish writing to English. The gameplay is exhilarating and the graphics state of the art - portrait displays, 3D perspective, tactical combat display and personalised weapons selections compile to form the ultimate breakthrough in fantasy role-playing computer games.



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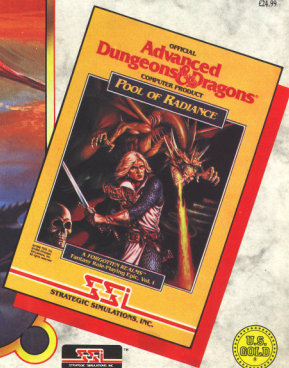
IBM PC

& COMPATIBLES

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ATARI ST

£24.99



ALTERNATE REALITY

DATASOFT in a world of their own

BEING plonked down in the middle of an alien city absolutely starforn is a pretty grim prospect, but then finding that

the city is inhabited by cutthroats, thieves, muggers, skeletons, ghouls and the like would make a strong man pale.

This fantasy role-playing game takes place in the city of Xebec's Demise, where you've been dumped by an alien spaceship. The first thing you must do is step through an energy field into the city, and as you do you set the level of your various characteristics, such as Stamina, Charm and Strength. These levels, or Stats, are displayed along the top of the screen during play, and change accord-

ing to how you fare when dealing with the city and its various inhabitants.

You need money (get a job at the tavern, maybe), weapons, a watch, a compass, a whole host of things if you're to survive, let alone flourish in Xebec's Demise. Time is compressed for playing purposes, so that each hour passes in four minutes.

Alternate Reality is tough from the start and complex enough to keep you going for quite some time. If there is a criticism to be levelled against it it's that maybe it's a little hard to get into. Combine that with some rather repetitive and dingy scenery and you have a game whose presentation is the weakest link.

● Rod Lawton

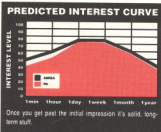
RELEASE BOX		
AMIGA	£19.95dk	OUT NOW
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AMIGA VERSION		
Indifferent graphics are not really relevant in this case, where the gameplay is all, yet they do affect the initial appeal.		
GRAPHICS	5	IQ FACTOR 8
AUDIO	2	FUN FACTOR 5
ACE RATING 749		

IBM PC VERSION		
The graphics are uninspiring, while the sound (if you can call it that) is more irritating than useful. The solid gameplay takes a while to emerge.		
GRAPHICS	5	IQ FACTOR 8
AUDIO	2	FUN FACTOR 5
ACE RATING 713		



PC - You could try attacking this Guard to gain some experience, but bare hands aren't much against a greatsword. Your Hit Points figure (top right) will count down to zero during combat as you approach death.

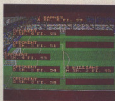


FOOTBALL MANAGER 2

Can ADDICTIVE manage it again?

IMAGINE the fame, glory and the money you'll receive when you've led your football team to the top of the first division. That's what you're aiming to do, anyway, but should you manage to win the league cup or the F.A. cup on the way, well it's icing on the cake, isn't it?

It's down to you to make the decisions - should you buy a new star, or sell an ageing one? Can you afford to do either? And as soon as you've got your full complement of players you've got to decide the team's line-up. Do you want four attackers and just a couple of midfield players? Or a



Amiga - Setting up your team formation.

strong midfield and a minimum attack?

As you have to play each team in your division as well as cup matches, juggling your team around and only playing your fittest men can be tricky (but that's all part of the game). The choices are all yours, and once you've made them you get to watch the outcome in the form of high-

lights of the subsequent matches.

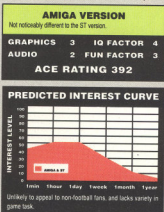
As your team improves, sponsorship money starts to pour in and your gate receipts swell. But prove to be a poor manager and you'll start sliding down the slippery slope toward bankruptcy.

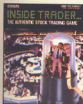
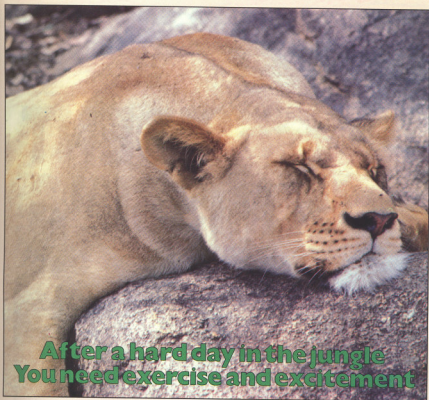
Football Manager 2's definitely best left to fans of the genre. The match highlights are badly animated, and it's hard to see how any of the extra frills added to FM.2 make it any better than the original version.

● Andy Smith

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ATARI ST VERSION		
The poor graphics do little to add atmosphere. Definitely one for fans only.		
GRAPHICS	3	IQ FACTOR 4
AUDIO	3	FUN FACTOR 3
ACE RATING 392		





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[illegible]

● *Tomorrow's Reality...Today*

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COSMO

TERRORISTS have kidnapped the president of the United States and the leaders of ten European nations as they attended a top secret summit in Lichtenstein. Your task is to track down the perpetrators and release all of the hostages.

You've been appointed as a special investigator and have the vast resources of the CIA and its computer data banks at your disposal. The quest begins as you listen to the audio tape enclosed in the package. It includes messages from the President and the kidnappers, background information to the snatch, Morse code transmissions and other messages and information. Pay attention to everything on the tape, as it will provide several clues to get the investigation under way with.

THE PRESIDENT IS MISSING

Kidnap caper from COSMI

PLUS...
Check out page 77 for the **DEFINITIVE ACE** guide to **CRIME** (and how to solve it).

Two things to remember before booting up the game are firstly that everything takes place in real time and secondly that you can't restart. This means that decisions taken are irrevocable - so don't go off half-cooked arresting anyone you come across. Logging on involves codewords and numbers and you've got to close the terminal properly each time in order to avoid that niggardly on subsequent occasions.

There are four main options available: files, agents, codes and comms. The first two will be the most frequently used as you try to obtain information to continue the investigation. The files are split up into eight sub-

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tions: subject, photographic, document, records, case files, audio, reports and confidential.

Subject files contain pictures and biographical details on all the characters you're likely to encounter. The photographic files are surveillance pictures of various scenes that may contain crucial information, but its



C64 - this is the biographical detail you get on one of the many characters you'll encounter during the investigation.

L.A. CRACKDOWN

Smack attack from EPYX

KUMQUAT 3 computers are being used as a cover for drug smuggling. As an experienced police investigator you've got to take a rookie cop under your wing and try to bust the case wide open.

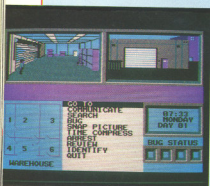
You begin by choosing from four possible rookies the one you think is most suited for the job. He actually does all the leg work and conducts conversations with other characters, so your choice can be important. The screen is split into several window areas showing the scene you're at, what the rookie is doing, a floor plan of the building and a menu of commands. These alter depending on your circumstances - the lower half of the screen can be replaced entirely by conversations or other information when it happens.

You start at headquarters and know of only one other location - a warehouse. You can get to it and the other locations you'll discover using a van. Once you're there you can

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send the rookie in to search rooms, taking pictures of any relevant material. You can also get him to bug rooms to listen in on telephone calls. The floor plan of the building shows the rookie moving around it as a dot, but doesn't show up anybody else who might be in there.

If the rookie comes across another character he will automatically have a conversation with them. You can then identify the character and get some background detail on them. Some of the people also have dossiers in the instruction booklet. Naturally there are certain things the rookie won't do, like search a room while someone else is present - he's not stupid.



You're staking out the warehouse. The rookie is inside, searching one of the rooms. He appears as a dot on the floor plan, and visually in the top left corner.

up to you to spot it. Documents are official papers, including an account of the events during the kidnapping. Records are pieces of information from various sources, which will need cross-referencing in order to find out what is important about them.

The case files are created by you for filing information, while the reports are from agents that you have to assign. The audio files are merely a list of what's on the tape. The confidential documents can only be accessed with a special clearance - but that shouldn't be any problem to a special investigator.

Once you've been through all the information initially at your disposal, you ought to have a large number of leads that need following up. To do that you can use one of

IBM PC VERSION

The photographs add an atmospheric touch, much needed by an otherwise text-heavy game. It suffers from disk swapping - unless you've got a hard disk to install it on.

GRAPHICS 2 IQ FACTOR 8
AUDIO N/A FUN FACTOR 1
ACE RATING 785

C64 VERSION

The pictures aren't as detailed, but are nonetheless adequate. Disk swapping is still a problem. The organisation of the files is awkward, because you can't step back through a series of screens but have to return to the main control screen.

GRAPHICS 1 IQ FACTOR 8
AUDIO N/A FUN FACTOR 1
ACE RATING 767



F7-OPTION: F10-ZOOM: F9-EXIT

PC - a picture from the photographic file of the scene of the President's abduction.

the eight agents assigned to you. The speed of their response will depend on the accuracy of the information you provide them with.

The two options you want use

much at first are codes and comms. The coding section is where you can either decode messages yourself or give them to

PREDICTED INTEREST CURVE



the deciphering section. The comms section is your link to the authorities, enabling you to search premises and detain people for questioning.

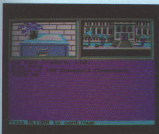
All this information should lead you down several paths of inquiry, hopefully to a successful conclusion. There isn't a single correct solution, but once you've got as much solved as possible you have to contact Cosmi for details on the outcome of the investigation.

There's quite a lot of analysis and cross-checking to do throughout the investigation. It's absorbing stuff and rewarding when you make discoveries. The pace is slow, but it's not a game that you'll want to rush - it requires plenty of time and thought to get through.

● Bob Wade

*To The Special Investigator,
I will not say who I am,
because I am a coward. But
the whole world has been
dragged into chaos and I
must do something. Believe
me when I say that everything
is going to break loose if I
don't. This is all I can
say.*

This note accompanies the package. Is it a clue? Who is the mysterious, cowardly writer?



Time to take a snapshot of some revealing evidence you've discovered.

In order to find new locations you've got to stake out the warehouse and follow suspects. They will drive off in cars and sometimes you will lose them. From there on it's a matter of gathering enough evidence and clues to lead you to an arrest. This will take a long time and a lot of effort. It's a matter of collating all the information and cross-referencing it to lead you to new clues.

Throughout the whole game you've got to ensure that the rookie gets enough rest and that you don't ask him to do daft things, otherwise he'll quit. Parts of the game rely on you being in the right place at the right time to tail

a suspect or search somewhere. Fortunately there isn't a strict time limit on the action, so you'll get more than one chance to bug calls, follow people or observe events.

All the information you gather in terms of pictures and bugged telephone calls can be reviewed at headquarters. This is also the place where the rookie can get some sleep.

Most of the investigation is purely a matter of leg work - there are no Columbo-like hunches here. There are a few unrealistic occurrences - you would think people would be a bit surprised to find someone wandering around their house without knocking at the door first. You may end up getting booted out of places, but you can wander into just about anywhere.

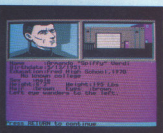
The game is well structured for working through, discovering information, and should prove a testing challenge.

● Bob Wade

IBM PC VERSION

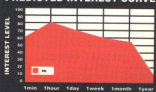
The graphic sequences are simple and unimpressive. The sound effects are virtually non-existent except for the title tune.

GRAPHICS 3 IQ FACTOR 7
AUDIO 1 FUN FACTOR 2
ACE RATING 713



You've bumped into one of the characters and can call up an identification screen to give more information about them.

PREDICTED INTEREST CURVE



BETTER DEAD THAN ALIEN

ELECTRA go left, right and fire

NOT much of a choice really – dead or alien. And when it comes down to it you haven't actually got the second option. So it looks like you're going to spend a lot of time dying.

This is basically a left-right shoot-em-up

with a few frills added. For a start the ship can move up and down the screen, but this is only of any use for one wave in every three – the aliens send two straightforward waves followed by an end-of-level guardian.

The waves are phalanxes of aliens that shuffle from side to side, Space Invader style, throwing down the occasional bullet. Every now and then an alien detaches itself and descends towards you. Shoot any aliens flash-

ing green and you can collect capsules for triple firing, rapid fire, clone ships, alien freezing, shields, extra lives and missiles.

The third wave guardians come in several forms. There's a mini-game of Asteroids, guardians who take multiple hits and aliens that you have to shoot away to nothing.

The action is all very predictable and adds nothing new to the pack of shoot-em-ups that already exist. A simultaneous two-player option makes progress easier, but doesn't add greatly to the action. The graphics aren't even much to shout about. Strictly for shoot-em-up addicts who like a tough, if unexciting, challenge.

● Bob Wade

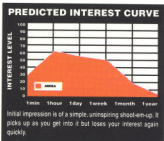
RELEASE BOX		
ATARI ST	£19.95dk	OUT NOW
AMIGA	£19.95dk	OUT NOW
PC and C64 versions under development		



AMIGA - The end-of-level guardian hovers above you, just waiting to be blasted to bits.

ATARI ST VERSION			
The graphics are virtually the same as the Amiga version. They play virtually the same as well. The action is a bit smoother and faster on this one.			
GRAPHICS	5	IQ FACTOR	1
AUDIO	6	FUN FACTOR	6
ACE RATING 458			

AMIGA VERSION			
The guardians are generally well put together, but otherwise the graphics are rather plain. There are lots of little sound effects and samples that jolly things along.			
GRAPHICS	5	IQ FACTOR	1
AUDIO	6	FUN FACTOR	6
ACE RATING 458			



CHUBBY GRISTLE

GRANDSLAM's parking trouble

FAT car park attendants make unlikely heroes, but in this platform puzzler you take control of just such a character. Your ultimate ambition is simply to get fatter and fatter until you weigh a ton (t), scoffing all the food you can without getting flattened, squashed, bitten or otherwise done in.

Twenty or so different screens contain food, useful objects and various hazards. You move from screen to screen via ladders and walkways – there's no scrolling. Neither is there any time limit, so you can tackle those hazards more carefully.



AMIGA - That's you hanging from the chain in the middle of the screen. That apple lower and to your right is what you're after.

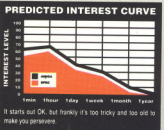
The puzzling element consists largely of observing the movement patterns of the nasty creatures out to get you, choosing the safest and most reliable routes and deciding which useful item – such as supermarket trolley, wellington boots or spanner – you'll need to tackle the next problem.

Chubby Gristle is amusing and original, but the game style itself is old, and the game hard enough right from the start to put a lot of people off. And twenty or so screens isn't an awful lot for those who stick with it.

● Rod Lawton

SPECTRUM VERSION			
Plays slower than the Amiga version, but detail and animation is good. Graphically, however, it's old stuff.			
GRAPHICS	5	IQ FACTOR	3
AUDIO	8	FUN FACTOR	6
ACE RATING 357			

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AMS	£8.95cs, £14.95dk	OUT NOW
ATARI ST	£19.95dk	IMMINENT
C64/128	£9.95cs, 14.95dk	IMMINENT



AMIGA VERSION			
The graphics and tune are good but nothing special, though Chubby's voice is quite amusing. Hardly state-of-the-art.			
GRAPHICS	6	IQ FACTOR	3
AUDIO	8	FUN FACTOR	6
ACE RATING 416			

AMSTRAD VERSION			
Nice enough graphics and adequate sound. Gameplay is the same as for the other versions.			
GRAPHICS	6	IQ FACTOR	3
AUDIO	6	FUN FACTOR	6
ACE RATING 363			

WHERE TIME STOOD STILL

Has OCEAN's clock stopped?

GLORIA, Dek, Clive and Janet have problems. How are they going to escape from the Himalayan plateau on which they've crash landed? You're the answer. You take charge of Janet (initially) and it's down to you to lead the others to safety. To complicate matters, this particular part of Tibet hasn't evolved with the rest of the world but has remained in the age of Pterodactyls and cannibals.

The action's all in 3D and is viewed through a large window that occupies the majority of the screen. Below the window, three bars indicate your character's strength, hunger/thirst and ammunition levels. You start the game controlling Janet, and wherever you direct him, the others will follow - don't move too fast, though, as you could lose other members of your team. And unless found, lost members of the team will wander around and try to make their own way off the plateau - their chances of succeeding are then very slim.

Solving the game revolves around the careful use of objects found lying around the game area. These are picked up by accessing a sub-menu (which can be moved around the screen Apple Macintosh-style).

The objects on the ground are displayed as icons under other icons representing objects carried by the character. To pick up objects on

the ground, simply move the pointer to the icon representing the object and then press fire. Your character will now, if possible, wander over to it and pick it up. All you need to do now is find a way of using the object correctly.

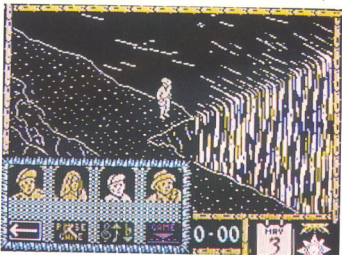
A good example of an object correctly used is when you come to cross the rope bridge (to the right of the crash site). Clive, who's overweight, manages to fall part-way through the floor of the bridge and cries for help. If you've managed to collect the rope earlier, you'll now be able to rescue Clive by electing to use the rope - get the picture?

Should you let Janet get killed, don't

panic - any of the others can take on the role of leader but your chances of survival are lessened.

Where Time Stood Still's an attractive game (similar in appearance to Ocean's *The Great Escape*) and one that's fun to play. Once you've started on the adventure and, after a few games, have figured out how to keep all your team alive for a while at least, you'll find it difficult to put down until you've completed it - which will take you a long time and give you a lot of fun. Once you have completed it though, it's doubtful you'll play it again.

● Andy Smith



How to cross that waterfall?



The crash site. Janet's sub-menu tells you there's a length of rope, a bottle of something and a bag lying around.

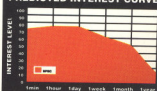
SPECTRUM VERSION

The graphics are great, but the 3D perspective is a little confusing to start with. Gameplay's good (but annoying at times, especially when you're trying to move your character and everyone keeps getting in your way). Overall, an enjoyable game for arcade adventure fans.

GRAPHICS 8 IQ FACTOR 4
AUDIO 6 FUN FACTOR 7

ACE RATING 719

PREDICTED INTEREST CURVE



STREET SPORTS™ SOCCER

Screen shot from CBM 64/128 version.



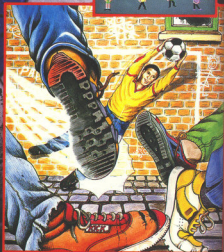
Select from 16 of the neighbourhood's hot hitters and hacks. Each with his own level of skill in hitting, fielding and throwing. With the right combination your team could be the champions. With the wrong combination, the chumps ...

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Choose the best 3 players from a cast of 9 neighbourhood characters and participate in this unique action packed soccer game. Execute all of the hottest soccer moves like passing on the run, heading the ball and shooting at the goal with a variety of shots. That is not all, avoid obstacles such as oil slicks, manhole covers and pot holes. Real life fast action fun from the masters of *Street Sports*...
EPYX

Screen shot from CBM 64/128 version.



EPYX



It's Tough on the Streets!

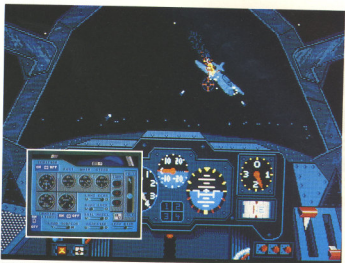
U.S. Gold Ltd., Units 2/3 Holford Way,
Holford, Birmingham B6 7AX. Tel: 021 356 3300

AGAINST a silver moon, an awesome shape comes rumbling towards its destiny...the end of the runway and an undignified plip into the Atlantic Ocean, if you're not careful. No matter how awesome or rumbly the Grumman Avenger - a twin-engine World War two bomber - might be, you can't just jump in and expect to fly it straight away.

Your ultimate aim is to sink the notorious Bismarck in this mixture of simulation, action and strategy. But first you must learn how to fly your aircraft - made more complicated by the fact that you must continuously switch from the pilot's chair to the engineer's, where you have to adjust the throttle, mixture setting, undercarriage, fuel tank selection and a whole host of other critical factors.

Two further views can be selected - the rear gunner's and the navigator's. The rear gunner has a sight which can be moved about the screen to centre on attackers. Fortunately, enemy aircraft aren't terribly persistent, and will peel off before they've done major damage. The damage is cumulative though, so get them as soon as possible.

The pilot also has a gunsight which he can toggle on or off. Beware, though - while



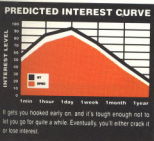
ATARI ST - There's one more *Dorrier* shot down in flames. The circled crosshairs just below the fuselage are your pilot's gunsights. (Inset) **SPEC** - The engineer's view before take-off. You'll need full throttle, the mixture on its richest setting, fuel tank 1, 2 or 3 selected and the wings locked.

NIGHT RAIDER

GREMLIN sink the Bismarck



ATARI ST - The map screen. That patch of yellow spots is a minefield - well out of the way, fortunately - but in the top left the *Ark Royal* is surrounded by two U-boats and an E-boat. You've also got, just off-screen, a flight of *Dorriers* heading your way. You're flying that red aircraft, which is heading your way. You're flying that red aircraft, which is heading your way. The going is to have nowhere to land if your carrier gets sunk! The yellow cross in the middle of nowhere marks your compass alignment point - it's about the safest place on the map!



the sight is on the aircraft's controls are frozen. You can fly and shoot at the same time...

Enemy aircraft are a natural target for your machine guns, but so are mines, U-boats and E-boats. In fact, the only thing that requires a torpedo is the Bismarck itself.

The navigator's view presents you with the strategy side of the game. A map of the area shows you where your carrier is, the positions of enemy aircraft, E-boats, U-boats mines - and even the Bismarck itself. You see while you're out to sink the German battleship, those Nazis are after the *Ark Royal*...

Night Raider is a long way from a true flight sim, but as a mixture of arcade action and strategy it scores highly. At first, simply landing and taking off is enough of a challenge, while navigation - and the act of actually finding an enemy vessel in a huge tract of ocean - is a feat in itself.

One of five missions of varying difficulty can be selected. A couple have a list of objectives to be tackled in sequence while for the last - ominously - you're just told the situation and wished the best of luck.

There's enough here to keep you busy for quite a while. Even the easiest mission is a long way from being a pushover. You may eventually go on to crack the toughest missions, but it's not going to happen overnight. Purists will find fault with the realism, perfectionists will pick holes in the graphics, but you can bet they'll still want to play it.

• Rod Lawton

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IBM PC	£19.99dk	IMMINENT
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ATARI ST VERSION

Pretty but basic graphics combine with mediocre sound to create an indifferent first impression. The lighting effects are nice, though, and the whole thing is quite atmospheric. The disk swapping between missions is about the only really annoying feature.

GRAPHICS	6	IQ FACTOR	5
AUDIO	5	FUN FACTOR	7

ACE RATING 773

SPECTRUM +3 VERSION

Slightly less playable than the ST version, if only due to the extremely sluggish gunight control. The graphics are actually very good though if you can forgive the inevitable attribute crashes. Sound... well, forget it. Otherwise, just as involving and enjoyable.

GRAPHICS	7	IQ FACTOR	5
AUDIO	1	FUN FACTOR	6

ACE RATING 690

HOPPING MAD

ELITE's bounce-em-along...

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C64/H28	£9.99cs, £11.99dk	OUT NOW
SPEC	£7.99cs, £12.99dk	OUT NOW
AMS	£9.99cs, £14.99dk	OUT NOW

C64 VERSION		
The usual big, colourful graphics are complemented by a happy little tune and good sound effects during play to create a 'play' effect well suited to the game.		
GRAPHICS	7	IQ FACTOR 3
AUDIO	7	FUN FACTOR 7
ACE RATING 570		

AMSTRAD VERSION		
Drab colours and sub-Spectrum detail make this the worst version, visually. The effects are good enough, but the tune plays only when the game is first loaded. Disappointing, overall.		
GRAPHICS	4	IQ FACTOR 3
AUDIO	5	FUN FACTOR 7
ACE RATING 517		

SPECTRUM VERSION		
Graphics are very good indeed, with bright colours and excellent detail, though the scrolling is not quite as smooth as on the Commodore. Sound is also very good, with the tune playing particularly well, although the sound effects are less than convincing.		
GRAPHICS	8	IQ FACTOR 3
AUDIO	8	FUN FACTOR 7
ACE RATING 576		

WHAT looks at first sight like a hyperactive caterpillar turns out to be a string of four bouncing balls you have to guide over and through some very hazardous scenery in this lively horizontal scroller. The aim is to collect ten of the small balloons that drift towards you, at the same time avoiding the many flying and earth-bound creatures you meet along the way. Touch one of these, and you lose one of your...well, balls. When all four are gone you lose one of your three lives and start that level again.

Joystick controls are simple. Push left to accelerate (increases the speed of the scrolling) and right to decelerate. Pressing

the fire button as the lead ball hits the ground gives you extra height for that bounce - useful for catching those higher-flying balloons. Take care though - this also puts you well in range of various seagulls, crows and other airborne predators.

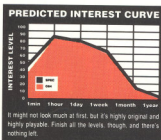
And that's basically the point of the game. Collect the balloons, advance to the next level, collect ten more and so on. With only eight levels to complete, though, the long-term interest is limited.

Nevertheless, Hopping Mad is original, attractive, and really rather fun. It's also addictive enough to keep you coming back again and again until you've cracked it.

● Rod Lawton



SPEC - You've already picked up one balloon, so there's just nine left to go. That rock (?) will lose you a ball if you don't avoid it, so will that nasty pair of jaws on the ground...



GIGANOID

MICRODEAL's identity crisis

FANS of the original *Arkanoid* will either love or hate this offering from Swiss Computer Arts - or both. You'll love it for its superb graphics, and for that familiar gameplay - or you'll hate it because you've spent all that cash on a mirror image of the former. Yes, it really does look that similar. The bat looks the same, the benefits look the same and it all plays the same.

Basically, you have to knock all the blocks from the screen via your moving bat and bouncing ball. Take too long over it and

the ball gets progressively faster. Collect the bonus capsules that come rolling down from the top of the screen to give you an extra-wide bat, glue for holding the ball momentarily for repositioning, extra lives, multiple balls, level passes and a handy laser - all standard *Arkanoid* fare.

That doesn't mean to say there aren't a few differences, though. In *Giganoid* you don't get those infuriating aliens

gyrating down from the top of the screen to deflect your ball at the last minute, but you do get periodic sub-games where you have to perry balls spewed at you by 'demons' to skip from one to four levels, depending on the difficulty level you select. Watch out too for the extremely unpleasant 'gatekeeper', who spits lethal bullets at you as you're trying to hit his bance with the ball.

Beyond that, there's not much to say about this highly competent but oh-so-unoriginal bounce-em-up. The graphics are quite superb, while the sound effects - including the 'voice' at the start of each screen - are also good. The fifty levels escalate in difficulty more progressively than with *Arkanoid*, so if anything the long-term gameplay is somewhat better. Nevertheless, the game is almost too similar for comfort.

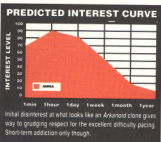
● Rod Lawton



Collect that red laser capsule and you'll be well set up to take out the rest of those blocks. Don't concentrate so hard you'll miss the ball though!

RELEASE BOX		
AMIGA	£14.95dk	OUT NOW
No other versions planned		

AMIGA VERSION		
Excellent graphics and equally good sound make for a very impressive effort. The gameplay, too, is good, despite some occasionally suspect collision detection. But my word, doesn't it look familiar!		
GRAPHICS	8	IQ FACTOR 1
AUDIO	8	FUN FACTOR 7
ACE RATING 666		



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SIDE ARMS

ATARI ST • GO £19.99dk • ACE RATING 580
C64 version reviewed issue 8 - ACE Rating 594
Spectrum version reviewed issue 8 - ACE Rating 493

IT'S that the two-player C64 version should be the one converted, because this one is one-player only. Having said that, this version does benefit greatly from mouse control. Movement around the screen is good and shooting left and right is handled using the two mouse buttons, rather than having to turn round.

The graphics are of a high

quality - smooth scrolling and plenty of detail. The gameplay is similar to the 8-bit versions but a bit tougher. There are the same five types of add-on weapon. This can be a problem because after arming up and blasting away imperviously for a time, you'll eventually lose a life and weapons, laying you open to several quick deaths.

● Bob Wade



PHM PEGASUS

IBM PC • Electronic Arts £24.95 • ACE RATING 826
C64 version reviewed issue 3 - ACE Rating 813

TAKE to the high seas again in your Patrol Missile Hydrofoil. This strategy-wargame's got the emphasis heavily on action. Your mission objective changes depending on the scenario (10 extra have been included for the PC version), some of which are very tough, all of which are timed.

The graphics are good, with

the screen layout being well designed and colourful. The sound isn't too special but it's survivable. What makes PHM Pegasus so much fun is the great gameplay and emphasis on action. Hard core simulation fans will probably find controlling the Pegasus far too simplistic, but action fans will love it.

● Andy Smith

What a month it's been for new versions of games. They've come piling through the door faster than the vice squad on a raid. The only trouble these games could get you into though, is lack of sleep from playing too many of them. Just how addictive are these new versions?

ST and Amiga owners have the merits of *Scrabble* spelled out for them. *Gauntlet II* teleports in on the ST to challenge 16-biters with myriads of monsters. PC owners can get their hydrofoils out, now that *PHM Pegasus* has made it on to their machines.

There's a whole host of other games that have been Updated, so for the next three pages you'll find the definitive view of the games on YOUR machine.



DARK SIDE

C64 Incentive • £9.95cs £12.95dk • ACE RATING 904
Amstrad version reviewed issue 11 - ACE Rating 915
Spectrum version reviewed issue 11 - ACE Rating 904

INCENTIVE'S brilliant program, using the Freescape system for creating a 3D world, makes a safe transition to the 64. It's slower than both the Amstrad and Spectrum versions, but makes up for it somewhat with some decent use of colour.

The game map is exactly the same as the other versions - the same wicked layout of ECD towers that have to be knocked out in the correct order by your man with a jet-pack. The time

limit seems to run out quickly on this version, but that's partially dependent on knocking out towers, so it's hard to tell exactly.

The big difference about this version is that it's got an excellent soundtrack accompanying the action. It's not too intrusive, but very hypnotic to listen to. However, you will occasionally need to hear the sound effects - stop yourself bumping into things, see.

● Bob Wade



PAUSED: Press any key to continue

GAUNTLET II

ATARI ST • US Gold £19.99dk

THE original Gauntlet was certainly very pretty and atmospheric on the ST, but it lacked the manic playability of the arcade and 8-bit versions. Has the sequel been improved?

The first thing to note is that this is a retitle rather than just a bunch of new levels using the same graphics as before. Everything is smaller on this version, so that some of the detail is missing, but comparatively more is on screen. The scrolling is also smoother.

The other really big difference is that you can now have all four players at once. You'll need the interface from US Gold costing £5.99 (we used the one supplied with *Leathernecks* from Microdeal quite satisfactorily). This adds an extra dimension to the action and like

Leathernecks can make it a lot more fun if there are four of you.

The ST version of the game also has the features missed out on the 8-bits like the dragons that take multiple head shots, thieves and muggers who steal objects from you. All the other monsters are included, as are the special objects and potions that give you powers like invisibility, invulnerability, repulsiveness, reflective shots and super shots.

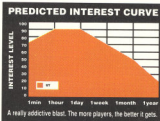
It's much more enjoyable to play than its predecessor and with the four-player option there's an added amount of fun. The most comprehensive of the many versions of Gauntlet, even if it is a little late getting to the shelves.

● Bob Wade

ATARI ST VERSION

The change in the graphics means it's less atmospheric but much easier to see what's going on. The sound effects are adequate, the best part being the cries of the fighters as they are hit. There's a lot of digitised speech as well, but it isn't that clear a lot of the time.

GRAPHICS 7 IQ FACTOR 2
AUDIO 6 FUN FACTOR 8
ACE RATING 820



UPDATE SPECIAL



The four beleaguered fighters face a horde of monsters with murder on their minds.

SCRABBLE DE LUXE

AMIGA • Leisure Genius £19.95dk

THE brain-stretching word game has at last made it onto the Amiga. It's not a game that could be considered graphically thrilling, but this version is the best looking of the lot.

Scrabble has always been a popular computer game, ever since its first incarnation on the Spectrum. With its transfer to the 16-bit machines it hasn't lost any of its appeal.

Scrabble provides an ideal computer opponent, who can store a database of over

20,000 words – although you may feel cheated by such words as 'ja' (haven't a clue what that means) or 'ai' (a three toed sloth from South America). You can play with four players, any or all of whom can be computer controlled.

There are a number of handy options at your disposal. For a start, you can set the computer skill level to suit your ability, and decide whether you want to see the computer's tile racks or the word it's thinking of. During the

game you can also get hints for possible words and positioning if you can't think of anything. You can make life tough for all the players by setting a time limit in which they have to think of a word. Set it at 30 seconds and you've got a game of speed Scrabble.

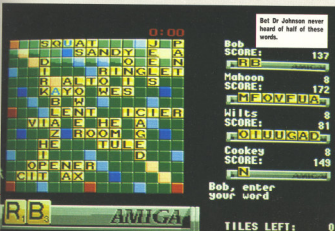
● Bob Wade

UPDATE SPECIAL

AMIGA VERSION

The graphics are the best of all the many versions – but that's not saying much. Sound is non-existent.

GRAPHICS 4 IQ FACTOR 8
AUDIO N/A FUN FACTOR 5
ACE RATING 785



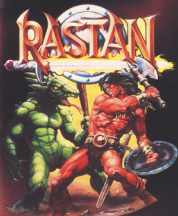
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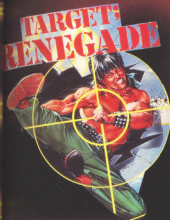
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IT
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recess - the back alleys, the car
Fight your way through
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HEADS, the BEASTIE BOYS, the
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AMIGA

THUNDERCATS

Elite £24.99dk

Spectrum version reviewed issue 3 -

ACE Rating 931

ST version reviewed issue 10 - ACE Rating 895

Every bit as pretty as the ST version. Delightful animation and nasty opponents demonstrate the conversion work that went into it. The gameplay is the same, simple addictive mix of running and hacking with a sword. As with the ST version the game doesn't stand up quite as well today as it did in 8-bit form in issue 3, but it's still pretty hot stuff.

● ACE RATING 895

AMSTRAD

BIONIC COMMANDOS

GO! £3.99cs £14.99dk

C64 version reviewed issue 10 - ACE Rating 838

Amstrad owners aren't going to be very happy with this one. It's obviously been ported over from the Spectrum version and is monochrome. The gameplay too is a good deal slower than the other 8-bit versions. If you can cope with that it's got the same level of tough action - if anything it's made easier by the slowing down of the action. Very disappointing indeed to look at, but it has got some gameplay.

● ACE RATING 584



AMIGA - Thundercats

TARGET; RENEGADE

Imagine £8.95cs £14.95dk

C64 version reviewed issue 9 - ACE Rating 653

Spectrum Version reviewed issue 10 - ACE Rating 650

Hack and slash your way through five vicious gangs before you confront the nefarious 'Mr Big'. The simultaneous two-player option's great fun, but it won't take you too long to beat the game, and once you've seen all the gangs the fun soon dies.

● ACE RATING 655

ATARI ST

BIONIC COMMANDOS

GO! £19.99dk

C64 version reviewed issue 10 - ACE Rating 838

Predictably this is the most visually attractive version so far, and does justice to the ST. One of the major differences about the ST version is the behavioural pattern of the enemies. They don't appear at specific points, but instead two opponents are always on screen, falling in from the top when one gets killed. This makes the game a lot tougher because there's never any respite from the attacks. It also results in frustrating and unavoidable

deaths from the sheer numbers of opponents being thrown at you. Apart from that it plays very similarly to the 8-bit versions and will get you hooked in more ways than one.

● ACE RATING 838

WIZARD WARZ

GO! £19.99dk

C64 Version Reviewed issue 10 - ACE Rating 812

In this RPG you start as a novice and the idea is to work your way up to senior wizard status. The graphics are good, the mouse control's fine, but as RPGs go it's nothing out-standing.

● ACE RATING 622

SPECTRUM

BIONIC COMMANDOS

GO! £3.99cs

C64 version reviewed issue 10 - ACE Rating 838

A good conversion of the arcade game that keeps the same pace and difficulty that was found in the C64 version. The graphics are obviously not as hot, but what they lose in terms of colour is made up for a bit in detail. The enemy have, if anything, become more difficult to deal with - making the game tougher. However, it has lost some of the immediate appeal that the C64 version had.

● ACE RATING 803

IMPOSSIBLE MISSION II

Egypt £8.95cs

C64 Version reviewed issue 9 - ACE Rating 785

Elvin Atombrenders up to his old tricks, and it's down to you to stop him in this platform puzzle game that follows firmly in the footsteps of the first, classic, game. The graphics are great (though the sound isn't) and the animation's wonderful, and if you liked the original, you'll love this.

● ACE RATING 785

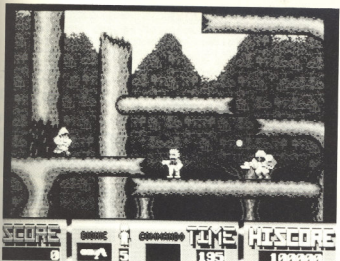
MARAUDER

Hewson £7.99cs £12.99dk

C64 version reviewed issue 11 - ACE Rating 791

This version curiously starts on what is the second level of the C64 original. The graphics are well detailed and, although not too colourful, look good. The defences take exactly the same patterns as the C64 but are somewhat easier to get past - you can dodge through zones without destroying things where you couldn't on the 64. The end-of-level sequence has been beefed up and is much tougher.

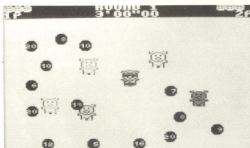
● ACE RATING 791



ST - Bionic Commandos

PSYCHO PIGS UXB

Porker from US GOLD

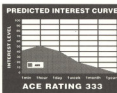


ZANY, wacky, goofy...stupid. It's a great name and it's accompanied by some corny instructions. However, when it's trying to hype up what is basically a very simple and unexciting game, you feel it's a bit of a waste of time.

It's a simple one-screen concept in which you run around

the screen throwing time-fused bombs at lots of other piggies. Avoid getting blown up and collect the bonus objects. That's all there is to it.

● Bob Wade



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THE FURY

MARTECH blow a gasket

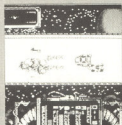
THE spate of car driving shoot-em-ups continues. In this one your car's viewed from above and you're driving around a track that's hanging in space. The idea is to complete a race and destroy a set number of other competitors, all within a time limit. Succeed and you'll be able to buy yourself some add-ons that may make your life a little easier.

Every third race is a game of tag, where you have to avoid being bumped by the car that's 11. Keep completing the races

and you'll start to earn the kind of money that allows you to buy the fastest cars and better weapons - which you'll need if you're going to destroy the ever increasing target number of competitors each race.

Sadly, *The Fury's* got very little going for it. The concept's old hat, the graphics are poor and it doesn't take long to get bored with the game.

● Andy Smith



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PSYCHOLOGICAL warfare's what this game's all about. Set in the world of the future when physical wars no longer exist, you play the part of a Dream Warrior who's out to rescue his chums who've been captured by a weird being called Ocular.

Ocular's a Dream Demon, an evil secret weapon devised by the powers of Mega Corporation, who control pretty much everything. Ocular has linked the dreams of your three trapped friends and imprisoned their psychic images.

You start the game at the offices of Megabuck Inc and the idea is to destroy the

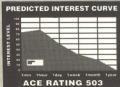
demons that roam the offices, some of whom carry small portions of your friends' psychic images. Collect the images of all three and you then come face to face with Ocular for the final showdown.

Dream Warrior's less than involving because the game task is so repetitive, and it soon becomes a chore to play.

● Andy Smith



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WORLD TOUR GOLF

ELECTRONIC ARTS to the fore

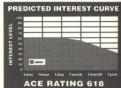
AMERICAN golf tournaments are being dominated by overseas players, so perhaps they're getting their revenge by selling us golf games. This one measures up well to the likes of *Leaderboard*, mainly because of a course designer option.

The gameplay is very similar to *Leaderboard* in the method of selecting direction, strength and swing. There are plenty of famous courses to play and the design option allows you to create many more. It's difficult to master and frustrating at times, but the extra options make it interesting.

● Bob Wade



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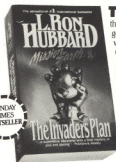
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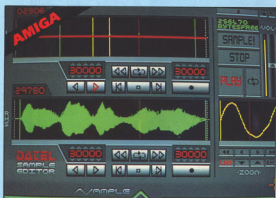
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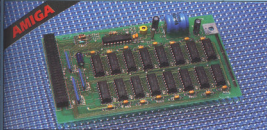
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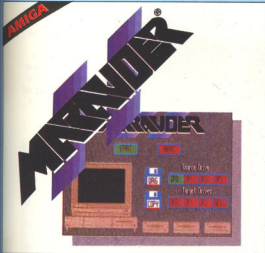


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PILGRIM

ADVANCED COMPUTER ENTERTAINMENT

This is TOO MUCH! How can we possibly cope with *Bards Tale III*, the new RPG *Wasteland*, and the micro version of *MUD* all in one month! Can you take it? Or will the Dark Priest cut you to ribbons? Read on and find out...

THE BARDS TALE III

Only weeks after the release of *Bards Tale II* comes this latest RPG from Electronic Arts. It features added spells, new classes of character, improved graphics and presentation, and a tougher challenge. Are you man enough to tackle it, or are you just fodder for Miasmic Curs? Check out the review opposite...



WASTELAND

They've been busy, these boys. The programmers of the *Bards Tale* series have now delivered their latest masterpiece direct from the States...*Wasteland* allows your characters to develop skills and pit them against an awesome array of irradiated enemies in a post-nuclear environment. Find out why the Mutant Bunnies are bad news on page 74.



MICROMUD

Ever fancied playing the infamous Multi User Dungeon, but didn't have a modem? Now Virgin claim to have produced a version that runs on your home computer and generates all the other characters itself. Is it MUD, or just plain mud...Check it out on page 74.



PLUS Pilgrim survey winners, No Problem!, news, snippets, and - at last - the instalment of the Pilgrim's Guide to *The Pawn* that fell off the bottom of last month's issue!



BARDS TALE III

The Thief of Fate

ELECTRONIC ARTS re-role the dice.

920

ACE RATED

MOST players will be familiar with the Bards Tale series, which has been around for several years now and remains unchanged in essence, though significantly improved in presentation.

The game format consists of a graphics window for displaying either your location or the monsters you're fighting; a text-window that enables you to select command options and view character inventories; and a character status panel at the bottom of the screen for seeing whether your party is dead, alive, or somewhere in between.

The objective in *BTIII* is more complex than in previous releases. You must travel through seven dimensions in search of The Evil One whose malevolent power has reduced the town of Skara Brae to ruins. If you've played previous Bards Tale games and have developed powerful characters, you can upload them into *BTIII* and get straight down to the nitty-gritty of doing battle with almost everything you encounter.

If you're new to the series, then you must first create your characters. Up to seven characters comprise a party, and the strength of your party is largely responsible for success or failure. Characters are defined using a series of menus that allow you to fix sex, race, and class for each one.

There are seven races ranging from Human to Gnome and thirteen classes,

BETTER LOOKING, BETTER PLAYING

The latest Bards Tale game offers a number of refinements over its predecessors. First, the graphics are better animated, richer in detail, and more varied — though Dark Priests still look like Magicians and a number of monsters appear suspiciously similar.

Second, the ranged combat routines (first introduced in *BTII*) mean that tactics have to take careful account of the distance between you and your opponents. In some cases, 30' of space can allow you to take constant breathers while your enemy hovers just outside striking range — useful for regenerating your characters during a nasty bout of combat.

Third, there are a large number of outdoor locations, as well as the scenes in the ruined city of Skara Brae and, gulp, underneath it. As an added refinement, you even get on-screen mapping in the dungeons — though it can be difficult to interpret and should not replace your own efforts with paper and pencil.

Finally, the game is bigger than ever before and represents excellent value for money in terms of playing time. It's true to say that many of the improvements are simply tweaks of the original games, but they add up to something a lot better — and worth getting even if you have the other programs in the series.

though only eight of these are available at the beginning of the game. The initial eight are Warrior, Paladin, Hunter, Monk, Bard, Rogue, Conjurer, and Magician. Once you've developed these characters in combat, you may then be able to aspire to the higher level classes of Sorcerer, Wizard, Archmage, Geomancer, and Chronomancer.

Sorcerers, wizards, and archmages are simply more powerful magic-users, but the last two classes are both new and different. Geomancers enable players who have developed powerful warriors to acquire magical skills for these characters, impossible in previous Bards Tale games. Chronomancers are required for teleporting between dimensions. You can see, therefore, that character development is essential if you want to move into different parts of the game, let alone triumph against the opposition you encounter there.

As in any RPG, you must survive a series of encounters with the ungodly. In each combat round, the opposition will strike blows to weaken your party. Complete loss of energy means death for a character (who may, however, be resurrected by magic at later stages of the game) but victory means, in *BTIII*, gold and experience points. The latter slowly accumulate, allowing your fighters to rise up through the ranks, mastering more spells or wielding more effective blows. To give you some idea of the scale of the game, there are 120 spells to cast, ranging from

Mage Flame (a small source of light) to NUKE — a positively devastating little number that annihilates your opponent by robbing him of a massive 2000 damage points.

The Bards Tale games are called role-playing games, which is slightly misleading for anyone who's played a real-life RPG in which the breadth of characterisation is infinitely more complex. Arcade players tend to shy away from them because the action appears repetitive and the combat routines are very simple; adventurers, on the other hand, are put off by the lack of machine intelligence and limited command options. However, these games offer tremendous lasting interest, are easy to play (though they require a lot of initial effort), and keep you playing because of the bonds you develop with your characters. *BTIII* is undoubtedly the best yet and deserves a place on any fantasy gamer's shelf.

RISE IN EXPECTATIONS

The sharp-eyed amongst you will note that the ratings for Bards Tale III result in the same ACE Rating that Bards Tale II received only four months ago. But *BTIII* is definitely a better game. What's going on?

It's all due to the improving standards of software brought about by games like *Dungeon Master* and *Corruption*. Every time a new state-of-the-art game is released, it raises our expectations of future releases and consequently affects the ratings for subsequent games.

Next month in ACE we'll be looking at this very subject in a special feature on Games Milestones — don't miss it!

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Other versions under discussion

LANDSCAPE 90 SYSTEM 88

CHALLENGE 93 ENCOUNTERS 90

ACE RATING 920

WASTELAND

A glimpse of the future from
ELECTRONIC ARTS

UNTIL recently there were two basic types of computer role-playing game. The *Bards Tale* format (see elsewhere in this column) gives you a view of your surroundings that scrolls as you move about. Then there was also the *Ultima* series format, in which the landscape is shown from above as a crude map that explodes into finer detail (though still rather crude) when you enter an interesting location.

Both formats enable you to create your own characters, and the Bards Tale games even allow you to load *Ultima* characters into them - though not all the objects they carry will be transferred.

Now the programmers of the *Bards Tale* series have gone one step further and developed a game that looks very like the *Ultima* series on the surface, but has an enormous number of gameplay features hidden away inside.

As with Abstract Concepts' *Mindtigher*, we're in a post-holocaust environment, but there the comparisons end. *Wasteland* has you traipsing around the American Southwest after a Star Wars-type blunder has resulted in

the destruction of most of the human race.

You start outside the Ranger Centre, which is roughly equivalent to the Adventurers' Guild in the *BT* series, and must explore the surrounding desert and townships in an attempt to clear up a series of disturbances. Characters you encounter then set you new objectives, and success is rewarded by hints and suggestions that take you nearer to your goal. A book of numbered paragraphs comes with game at times during play you will be prompted to read them either for scene-setting or for details of a new challenge.

Movement around the country is in top-down view (as in *Ultima*), with more detailed displays of townships such as Las Vegas (undestroyed, apparently) and various nomad camps. Adversaries are displayed BT style in full-frontal, animated glory.



Instead of swords and spells, you have a phenomenal choice of weapons ranging from armour-piercing rockets to an AK-97 assault rifle. However, it's the way you go about your homicidal business that really marks out this game.

First, you can split your party, so in theory you can creep up on an adversary from all sides. You can also leave a wounded companion and run for help in an emergency - though time passes for everyone and he/she may be dead or killed by the time you return.

Second, your use of weapons and approach to puzzles is dominated by the knowledge your characters have, rather than just brute force and hit points. Party members can acquire skills ranging from Cryptology to Silent Movement, depending on their IQ levels, which can be enhanced during game as a result of gaining experience points. Choosing the skills your party starts off with is a very important part of the gameplay.

Third, the game behaves like a giant database and every time you carry out an action, it permanently affects the program. Thus if you blow up the Ranger Centre, don't even expect to go back there. This even over-rides previous SAVES, so to do a proper restart you have to create a new master set of disks from your back-ups (you did keep back-ups, didn't you?). This is a fascinating idea, but but backing-up involves no less than 45 disk swaps.

I didn't find *Wasteland* quite so atmospheric as *Bards Tale III*, but then I'm a traditional spell caster - what I did find compelling was the extra dimension of strategy, which leaves the cut, slash, and spell scenario of the *BT* series way behind.

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LANDSCAPE	85	SYSTEM	90
CHALLENGE	91	ENCOUNTERS	96

ACE RATING 921

MICROMUD

VIRGIN throw away the modem

IF you've ever wanted to play the multi-user game MUD, but didn't fancy logging on with a modem, now's your chance. This version presents an almost identical user-interface, gameplay, and challenge as the original game - with the computer handling a collection of 'human' players for you to interact with.

The scenario is simple. Wander around the land collecting treasure, which you must then deposit in the swamp. You gain points for each item and also for defeating other characters in battle.

There are over 400 locations, many of which are very well described, together with a database of 100 players, of whom ten can play simultaneously. To make things even

more hazardous, there are 112 computer controlled creatures (called mobiles) who trot about and tend to be aggressive.

The game holds 250 objects, not all of which are valuable, but with ten characters rushing about the place, the loot soon gets picked up. For this reason, the game 'resets' every forty minutes of real-time at which point you lose whatever you're carrying and must start again - so rush to the swamp if you've got treasure to deliver!

Considering the problems of making computer controlled characters seem human, the program succeeds remarkably well. Perhaps us humans are simply more mechanical than we like to think, but in any case the characters you encounter certainly

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fight, hug, shout, and flee just like the real McCoy.

The only drawback with this game is the speed, which because of all the processing involved can at times be horrifyingly slow, especially during combat in a crowded location. Otherwise, you have a very cheap way of playing MUD or, looked at in another way, a very large text adventure with some very active interactive characters and a wonderful atmosphere. Definitely worth checking out by anyone not totally addicted to pretty pink

LANDSCAPE	85	SYSTEM	78
CHALLENGE	90	ENCOUNTERS	82

ACE RATING 852

NO PROBLEM!

Here's a selection of timely tips for Pilgrims lost, loitering, or simply too lazy to work things out for themselves. Whether you've been stuck with a lump of dough in *Kings Quest III*, burnt to a crisp in *Shadowgate*, or stumped by the weedkiller potion in *Gnome Ranger*, it's *No Problem!* for the Pilg!

Gnome Ranger

Get the greenslave to take a teletelly to the stinkwort and drop it.

Weedkiller potion: Thistle, Elderberry, Mint, Rowan

Animate potion: Elder, Thistle, Rowan, Mint
Fertiliser potion: Mint, Rowan, Elder, Flower

Rigel's Revenge

Troubled by worm? Follow the tracks.

To get uniform, throw rubble at light (make sure it's Rigelian)

To get past the guards, find the bomb, then introduce it.

To enter hut, use bomb.

The patch and dinghy are red herrings.

The Big Sneeze

Examine car to get dynamite, then put dynamite in keyhole and light fuse to open safe.

Then go north to shelter from the blast.

Rebel Planet

Examine the steps for the key to the alcove.
Answer SAROS to the man in HQ.

Beyond Zork

Sell Mischief and fireworks – both useless.

To retrieve the jewel from the idol – try to kill the baby hungus and then run to idol and up with the mother chasing you. After she's weighed down the idol base, go further up and

retrieve jewel. You let it fall and the mother swallows it. However, if you use the Eversion stick on the mother, the jewel is yours to sell in exchange for the hourglass.

Kings Quest III

Open wardrobe in Wizard's bedroom then look above wardrobe for key to open wizard's safe. Leave dough in ears as wizard can't see it.

Shadowgate

Get the shield from the lair first.

Then take the spear, axe, and wear helmet (operate it upon yourself).

Break middle mirror with axe and unlock with key from lake.

To get key from lake, put white gem in hole in pedestal room, then put sphere in lake to freeze it.

The Uninvited

Leave the car ASAP.

Wear the mask which allegedly wards off evil.

Read the journal in the bedroom

Spray railing on verandah with Spider Cider,

leave, then return to get spider.

Scare spectre with spider.

Contact the Pilgrim!

From next month we'll be printing a selection of readers' letters in each issue. Make sure you get YOUR views onto these pages by writing to the Pilgrim on any subject related to adventuring.

The address is:

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PLAYERS GUIDE TO THE PAWN PART 3

So you opened the door, rescued Princess Lacey, and taken her back to King Eric. Silly you – you lost 40 points. Go back to your last SAVED position and this time IGNORE the heavy wooden door, OK?

At the top of the ancient tree, you can use the wooden key and, once inside, try mixing colours to get light. Check out all available locations and wear the hard hat. Don't miss the coin (sure you're not sitting on it?), the teapot, and the carrot.

Once you've found the lift, push the button, wait around, then slide the door open. Going down in the world finds the lumps, which only the trowel will get for you.

The safe under Baconburgers rug can be opened with the blue key and yields a ballot paper which, if put in the right box, enables you to VOTE FOR GRINGO and get 40 points. Decent chat, Gringo...

The coin, by the way, enables you to buy the whisky bottle and the beer bottle from Honest John. A better deal than the alchemists, who will rip off your lead – but at least you get 30 points for it (and lose the rice into the bargain). Cast a spell on the tomes.

In the wallpapered room, get the hook, tie the rope to the hook, and tear the paper wall with the trowel. Then you can climb through it and...go to hell! Knock four times, dispose of the whisky, and everything should be hunky-dory. Jerry Lee Lewis, on the other hand, expects beer.

Next month: the final stretch.

FIVE LUCKY PILGRIMS:

Many thanks to all of you who returned the Pilgrim Questionnaire. It's going to help us enormously in giving you exactly what you want on these pages. In particular, in future we'll be bringing you:

- more tips and players guides
- more readers' letters
- ...and as many reviews as possible!

The five lucky Pilgrims are: Sharon Aston of Port Talbot; Michael Major of Andover; Janice Chamley of Warrington; Jack O'Driscoll of Dublin; and Hans Elias of Cuckfield. A big thank you again to all of you, and we can expect to see the benefits of your advice starting from next month...Watch this space!

WHAT'S YOUR FAVOURITE GAME?

One of the questions we asked in the Pilgrim Questionnaire concerned your three favourite adventures. The following twenty received the most mentions – draw your own conclusions!

- 1 The Pawn
- 2n: The Hobbit / Guild of Thieves
- 4n: Bards Tale / Dungeon Master / The Zork Series
- 7 Rigel's Revenge
- 8 Hitchhikers Guide to the Galaxy
- 9 Lords of Time / Lord of the Rings
- 11 Jinxer
- 12 Knight Orc
- 13n: Gnome Ranger / Kentilla
- 15 Ultima Series
- 16n: Space Quest/Police Quest series / Leather Goddesses of Phobos / Beyond Zork / The Boggit
- 20 Planetfall

RIGEL'S REVENGE UPDATE

Nigel Brooks has phoned in to tell us about his game *Rigel's Revenge*, which – as many readers will know – has a serious way in the early versions. Nigel tells us that the bug has been corrected and that copies now distributed by Mastertronic are OK. Unfortunately, there's no way of telling which version is which apart from by playing them, so it's best to send off your bugged copy to Mastertronic for a replacement.



The Legend
Continues

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WATCHING THE DETECTIVES

I looked him over, just once from the corner of my eye. I wouldn't say he was big, no more so than a Charolais bull. His jacket was wide enough to park my car under and could have hidden anything from a .32 to a howitzer.

"Hey, are you Marlowe?" he grunted past the cigarette jammed like a toothpick in the corner of his mouth. I took the unlit cigarette from my mouth and went to speak, but found myself staring down the barrel of a gun.

"Too late Marlowe, you should have read the instructions," he said as he fired.



Which of us hasn't at some point dreamed of emulating the exploits of Sherlock Holmes, Miss Marple or Sam Spade? Detective shows are immensely popular on TV, none more so than the whodunnit? Agatha Christie type of set up where the audience can try to spot the killer (it's always a killer) for themselves.

In a world so fascinated by crime and detection it's hardly surprising that computer games have tried to get in on the investigation racket. And why not? After all computers are used more and more in real investigative work, and are perfect for letting the player do the detection of their own pace. And then there's the immense satisfaction cracking a case can give.

One of the main areas where detective games have prospered is in the realm of adventures. Most of them involve some sort of deduction and investigation, so it's not hard to turn them into full-blown detective mysteries.

It's interesting to look at arcade games and to see the

ACE dons its dirty mac and deerstalker hat, pockets a magnifying glass and packs a rod. Aside from looking pretty silly, it means we've delved into the murky depths of investigation and the underworld. Could you solve the most dastardly crimes a micro can throw at you?

detection elements that occur in them too. Take a game like *Driller*. It's got a strong detective element in that first you have to find the clues or objects and then work out what they mean. Mercenary also has that sort of set up, and both games seek to attain realism in the game universes they create. They aren't pure tests of brain power, though, because they involve so much arcade action.

There have been some notable games based on detectives that haven't actually had anything to do with detection.

Batman, that legendary crime fighter, didn't get anywhere near a villain in his memorable arcade adventure. *Bladerunner* too became an arcade game and ignored the possibilities of tracking down androids that are just like humans. Perhaps we'll get a rework of that with a few android-detecting elements of *Terminator* thrown in.

The cryptographic elements of detection have even popped up in games like *Impossible Mission*. Here you have to find and piece together puzzles. The searching is more akin to break-

ing and entering but piecing together the code word is a tough bit of work under time pressure.

Virtually all games have a missing person or object in their scenario, but most fail to carry the investigation element through to the gameplay. Those that do can be enormously rewarding. The only surprising thing is that more classic detectives haven't appeared in computer games. Never mind S. Holmes and friends, how about Columbo, Sam Spade, Hercule Poirot, Magnum, Kojak, Cannon, Lew Archer, Inspector Clouseau... the list is massive. Hoppy hunting, and mind your back.

CLUEDO Leisure Genius

Amstrad	9.95cs	£14.95dk
C64	£12.95cs	£14.95dk
Spectrum	£9.95cs	

The computer versions of the classic board game stay very true to the original. In a way it's a shame because it fails to make use of the possibilities the micros offer. However it's still bound to



appeal to the many lovers of the game.

The aim is to discover who murdered Dr Black, what the murder weapon was, and where the evil deed was carried out. This is done by moving around the mansion in which the game takes place, asking the other players if they have particular cards relating to people, weapons or places. They must reveal these cards if they have them. By a process of elimination you should be able to track down the three pieces of information and win the game.

Up to six players can take part, or you can compete against computer players. The fact that the game is on computer means more can be made of graphics and sound, and it eliminates the need for those forms where you tick off the eliminated objects, people and places.

KILLED UNTIL DEAD

US Gold

Amstrad	£9.99cs	£14.99dk
C64	£9.99cs	£11.99dk
Spectrum	£8.99cs	



This game doesn't just set you the task of solving one case but 21. The cases all involve five authors of murder books, who are collectively known as the Midnight Murder Club.

All the cases take place at the hotel in which everyone is staying. The five writers are all amusing stereotypes and the investigations will reveal plenty of funny facts. However, solving the cases is still a matter of digging for information and working out what it all means.

Information comes your

way from a number of sources. You can plant bugs in rooms, use cameras to monitor rooms, break into rooms, or use the files. Phone calls to and from the characters can also be useful, and often provide a few laughs.

A lot of guesswork goes on, but it's a very entertaining game that takes a more lighthearted view of the whole detective genre.

MOVIE

Imagine

Spectrum	£7.95cs
Amstrad	£8.95cs

This isometric 3D arcade adventure was very nearly a brilliant game, but just fell short on a few points. It stars Jack Marlow, a raincoated private detective trying to recover a tape recording from Bugs Malloy, a bad dude gangster.

The unusual thing about the game is that it is icon controlled



for all actions - drop, pick up, shoot, walk, talk, punch and throw. Accessing them is slow but you've got interesting features like talking, which allows you to type into a speech bubble and try to get information from other characters - including a parrot.

There's a strong arcade ele-

ment with lots of henchmen wandering around shooting at you. There are even twin sisters - one a femme fatale who will get you killed and the other a friend who plays an important part in solving the game. Not a game for text specialists, but captures the atmosphere well.

THE PERPETRATORS



Enough of all this goody-goody stuff, where are all the bad guys? Here are a couple of games that turn the tables and allow you to be on the wrong side of the law. In other words they're perp-em-ups.

THEY STOLE A MILLION

Aniolsoft

Amstrad, Spectrum and C64 - currently undistributed.

Sad to see another title that isn't currently available. This time it's because Aniolsoft pulled out of the UK market and nobody has picked up the rights to market this as far as we know.

It's a very novel game in which you have to pick a team to perform a robbery. There are many different possibilities, each man having different skills. Then the job has to be planned down to the last split second, before you actually see the raid as it happens.

There's an immense amount of planning and thinking through

to do. The game is superbly presented using windows. Still a very original concept with nothing quite like it on any machine.



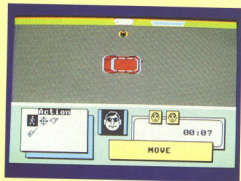
KING OF CHICAGO

Cinemaware

Amiga	£29.99dk
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This graphically delightful and very atmospheric game casts you in the role of a mobster in Chicago. His aim is to take over from the gang boss by fair means or foul, and then to take control of the whole city.

Nothing stands in his way, but he might easily wind up on a slab in the morgue himself. Like other Cinemaware products it lacks a bit of gameplay and variation, but it is very slickly put together and is no pushover to complete.



FOURTH PROTOCOL

Century Communications

No longer available. Check for second hand stocks on Amstrad, C64 and Spectrum.

It's a shame this highly enjoyable investigation game is no longer widely available because it's still one of the best of its kind. It's based on the Frederick Forsyth book, and was out before the film.

It's in three parts, which are quite wide ranging, as you try to unravel an international plot. The first part of the game involves tracking down the person who leaked some documents, solving other cases and proving your ability along the way. Then it's off to locate and deactivate a nuclear bomb which has been planted in London.

All three sections are well presented and use an icon sys-



tem. You've got a lot of freedom in what you do, so it's easy to follow up on red herrings. The whole thing is very difficult to solve but is completely engrossing. If you haven't got a copy and can't get hold of one then you'll just have to wait till somebody has the gumption to re-release it or convert it for the 16-bit machines.

THE VERA CRUZ AFFAIR

Infogrames

Amstrad	£9.95cs	£14.95dk
C64	£8.95cs	£14.95dk
Spectrum	£8.95cs	
IBM PC		£19.95dk

This French game was rapidly followed by *The Sydney Affair*, which was in a very similar mould. You play a detective from the Gendarmerie, who has to investigate what initially appears to be a suicide but turns

PICK OF THE SHERLOCKS

Think of detective fiction and most people will, at some stage or other, pick on Sherlock Holmes. Not surprising, therefore, that this infamous character should have poked his head up in a number of computer games, most of which claim to give you the opportunity of solving classic cases in the style of the great detective.

The most recent offering must be Infocom's **Sherlock Holmes**, but the emphasis here is more on puzzle-solving in traditional adventure style than on player detective work.

The game features yours truly as Doctor Watson rather than the legendary detective himself, but Holmes follows you about during play. However, he contributes little to the action as you attempt to locate the missing crown jewels. The game starts at 5.00am on Saturday and you must find the villains – and the jewels – before Monday morning to avert a national catastrophe.

The action takes place in 19th century London. The map is relatively small, so mapping is the least of your troubles. There are a number of puzzles to solve on the way to locating the jewels and it's this puzzle element, paradoxically,

that weakens the detective element and therefore the game. Finding a jewel in Big Ben's clock tower is all very well, but it would have been more in keeping with the genre if logic had led us to its location and not simply experienced use of the EXAMINE command.

A rather older game is **Sherlock** from Melbourne House. When first released this adventure, with its real-time puzzles and strong detective element, was way ahead of its time. It still plays well and offers considerable challenge as you attempt to solve a murder mystery, catch trains, and find your way about a murky, misty London



town. Only available on C64 and Spectrum, however.

Amstrad CPC owners can enjoy a very different experience with CRL's **Robin of Sherlock**, from Fergus McNeill of **Delta 4** fame. This is an excellent satirical stab that manages to knife both Adventuresoft's ancient **Robin of Sherwood** and the whole Sherlock detective scenario at the same time. Worth it for a laugh, but don't expect too much serious detective work.

ROBIN OF SHERLOCK

CRL

Amstrad	£7.95cs
---------	---------

SHERLOCK

Melbourne House

C64/128	£14.95cs
Spectrum	£14.95cs

SHERLOCK HOLMES

Infocom/Activision

C64/128	£19.95dk
IBM PC	£24.99dk
Atari ST	£24.99dk
Amiga	£24.99dk

out to be not so simple.

The case starts with an examination of the scene of the crime. This is graphically depicted and has to be carefully scoured to make sure you don't miss a clue. Information in hand, you head for the police computers, from where the rest

of the investigation takes place.

You can communicate with other branches of the police and judicial services in order to get more evidence. You can call up witnesses' statements, which are accompanied by pictures of the people.

The only problem with the

game is that it's not very well translated. This means you can get an awful lot of frustrating responses from the computer, without finding out what you're doing wrong. If you can cope with that, both *Adif* games are testing pieces of detective work.

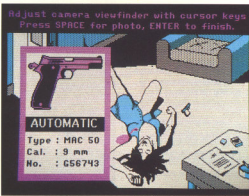
SUSPECT

Infocom/Activision

Check with Activision (01-431 1101) for prices and availability

One of the better text-entry solve-em-ups and worth attempting even if you're not a habitual text adventure player.

Suspect takes place in an American country mansion where the hostess is found strangled during a high society fancy-dress party. You're attending the party as an eager young news-hound looking for gossip column material. Your role as observer is serious-



...Slumped behind the large desk is the body of Veronica Ashcroft. Her mask has been pulled off, though the rest of the costume is still intact. Around her neck is the agent of death, a rope. In fact, it's your lariat, which you got tired of carrying around and hung in the closet with your coat.

Michael stares, horrified, at the body.

Colonel Marston stares, horrified, at the body.

>Ask Colonel Marston about Michael

'He must be devastated. But he's a strong man. He'll survive it.'

>Michael, tell me about the manila folder.

'I'm not sure what I can tell you about the manila folder.'

You're on the spot in *Suspect*. Not surprisingly, Michael clams up about the manila folder - it contains some interesting information.

ly compromised, however, by the fact that it is YOUR lariat that is found around the young lady's neck. Someone has fixed you up good and proper...

Gameplay is simple but atmospheric. First you must map the mansion; having done that, you can begin to build up a detailed picture of the various characters' behaviour and movements. You can question them, eavesdrop on them, follow them about, and interact with them in a number of different ways. One of the program's main strengths is the way in which the various characters respond to your advances. The Infocom parser is used to excellent effect and many of your conversations will be uncannily realistic.

Text adventures aren't to everyone's taste, but *Suspect* is a minor classic - and an excellent whodunnit into the bargain.

CORRUPTION

Magnetic Scrolls/Rainbird

Atari ST	£24.95dk
Amiga	£24.95dk
IBM PC	£24.95dk
Spec	£15.95dk
Mac	£34.95dk
C64/128	£17.95dk
Amstrad 6128 only	£19.95dk

Receiving an impressive 920 rating in issue 11 of *ACE*, *Corruption* is the latest release from the software house that brought you *Guild of Thieves* and *The Pawn*.

As with *Suspect*, even people who don't normally go a bundle on adventures should get good value out of *Corruption*. The game makes you a

Raymond Chandler, Dashiell Hammett, Ross MacDonal...creators of heroic, single men who know which end of a gun you should point at the ungodly, and - hardly suprisingly - originators of a style of fiction universally imitated by computer programmers.

Despite the number of games that attempt to combine mystery with murder and mayhem, only a few qualify for mention. *Intrigue*, reviewed in *ACE* issue 8, gives you a flip-screen display that takes you through the main locations of Washington DC in an attempt to stop the ungodly from unleashing a cloud of poisonous gas all over the city. Detective work is confined to TALK TO, SEARCH, and PHONE commands, and the game suffers from being rather too easy.

Deja Vu is a better bet altogether. Programmed by ICOM Simulations, the game was the first of ICOM's now famous icon-controlled games that offer graphics and text input as well as joystick/mouse control. You wake up in a deserted room with a corpse and have to clear yourself of guilt and track down the true offenders. Great fun, good sense of atmosphere, and some tricky puzzling that will appeal to both adventurers and arcade freaks alike.

Just as good as **Deja Vu** is Activision's excellent icon/text/graphics adventure **Borrowed Time**. There are some tremendous sequences in this game which makes maximum

partner in a London stockbroker, but only hours after your promotion you find yourself arrested by the police.

Aided by excellent graphics and a powerful parser, you must travel about London and investigate your colleagues and their shady associates. Someone has put the finger on you, and you must either find the true villain or end up in jail. Even better, you must nail the person responsible and get your revenge.

Corruption is a tricky game and you'll have to use your head if you're to crack the case. Every move in real life uses up a minute of game-time, and

you'll find yourself hard pushed to solve the puzzle before the end of the day. Adventure fans will love it and those normally accustomed to arcade action could well find it a good introduction to text-based games. ●



JEEPERS, PEEPERS

use of textual responses to raise the atmosphere and imitate a traditional American detective fiction scenario. Unfortunately, it's no longer available, but you could try for a second-hand copy or ask your dealer to pester Activision to import a copy from the States.

We have to thank Fergus McNeill (as always) for a completely different kettle of fish - his satirical private eye game **The Big Sleaze**. This text and graphics adventure, produced using the Quil, makes life very difficult for the player in a world where just about everything goes bang. Avoid the bangs, crack the case, and have a jolly good time without expecting anything too serious.

Here at *ACE* we can't help feeling that the ultimate American

thriller has yet to appear in computer game format. We can't wait to review it, so would someone please write it?

THE BIG SLEAZE

CRL

Currently undistributed

INTRIGUE

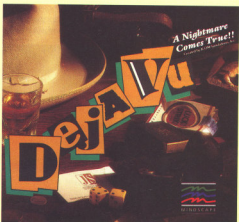
Mirrorsoft

C64/128 £12.99dk

DEJA VU

Mirrorsoft

C64/128 £14.95dk
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The privileges of membership continue: free with Issue 2 of *Confidential* is a private, specially-commissioned mini-adventure disk from *The Guild of Thieves*, *The Pawn* and *Jinxer* authors, *Magnetic Scrolls** reserved for members, and never to be publicly released.

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* Available on the ST, Amiga, PC, Mac, PCW, C64 and Spectrum +3; if you use a different machine, we've a different treat in store for you - wait and see!

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STRATEGY SPECIAL

Why are American big boys Electronic Arts taking a great interest in strategic software? What's got erstwhile 8-bit wargaming house CCS looking closely at the ST, Amiga and PC? And why do SSI think the whole software market is changing?

Strategy software has generally been seen as something of a niche market. The big companies have simply not been interested in producing games for a small - though dedicated - following. That was then.

This is now, and things are about to change - radically. Electronic Arts have decided to dip their toes into the British strategy game market and are now distributing games from Australian wargame specialists SSG (Strategic Studies Group). E.A. have, as Debbie Allan (E.A.'s Product Manager for Affiliate Labels) says, 'No great masterplan' for the British strategy scene, but because E.A. are involved with SSG in the States, and because they see the British market as 'limited at the moment, but growing all the time' they've decided to test the waters over here and will be releasing some SIX titles now, with another three scheduled for release before Christmas.

So why all the sudden excitement about Strategy? In the words of Trisha Peters from CCS, who agrees the market's expanding, 'People are becoming more computer literate, and are not afraid to play a game that doesn't just go Zap! and Pow! Trisha also reckons that the people owning the larger machines are generally more aware of their wants, and are looking for software with real lasting interest'. We'll soon be seeing CCS titles released on the larger machines, with *Desert Rats* on the PC being the first.

The most optimistic view comes from Jerry Howells (U.S. Gold Product Manager handling SSI games) who thinks the market is definitely growing, along with the Fantasy Role Playing (FRP) market. SSI will soon be bringing us a series of games based on the *Advanced Dungeons And Dragons* system that Jerry thinks 'will really open up the FRP market'. Again, Jerry reckons the software market in general is going to change greatly in the next 18 months, because people are bored with the same old shoot-em-ups, and the 16-bit machines are much more capable of handling complex game ideas.

So, what's all this new software like? Can these Aussie games hold their own against the latest SSI and CCS games?

● REACH FOR THE STARS

SSG/Electronic Arts

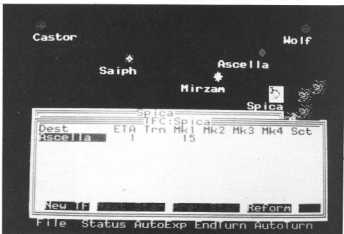
IBM PC

£24.95dk

Although the title conjures images of cowboys and gunslingers of the old American West, it's actually a space exploration/conquest game. The game map contains some 50 or so stars, each with varying numbers of planets, and the idea is for you to take charge of your forces and go conquer the other stars before the other players. Up to four people can play at once, but the computer will play any or all of the other players if you wish.

Every other turn is just a movement turn so spending your RPs rashly is NOT a good idea.

Once you've played through the tutorial game and got to grips with how the game works (the manual's not as helpful as it might be, so be warned), you'll be ready to start on your own. The game turns can be set to between 40 and 150, although you can play on if you wish. After a couple of games at the easiest level, you can start making life difficult for yourself by including options that allow stars to go Nova - destroying planets, ships and everything in the system - or you could allow natural disasters to occur on planets (upsetting the economy).



The game starts by giving you a planet around a star (at random) and you're then confronted with a production screen. Here you spend your RPs (resource points) on things like new ships, colonists, or just improving the industrialisation of the planet (that enables you to produce more RPs each turn). At the end of the production phase, the ships etc are manufactured and you move immediately into the movement phase. Then you decide where to send your ships.

These extra options and the advanced scenario included make for one terrific game. It's not easy to get straight into but once you get to know your way around you'll be well and truly hooked.

OPPOSITION 08 EASE OF USE 06
 DISPLAY 06 GAME DEPTH 09
ACE RATING 940

● DECISIVE BATTLES OF THE AMERICAN CIVIL WAR (VOL II)

SSG/Electronic Arts

C64

£18.95dk

Down to Earth and back in time with SSG's latest game due out any moment now. The game's the sequel to *Decisive Battles etc Vol I*, and deals with the latter half of what's widely regarded as the first modern war (did you know trench warfare, which featured so heavily in the Great War, was actually first introduced in the American Civil War?).

This single player wargame features scenarios of five of the most crucial battles, plus a game designer that allows you to create your own battles (you can even alter the look of the icons). Once you've decided on your scenario and which side you're going to control, you're thrown into the game.

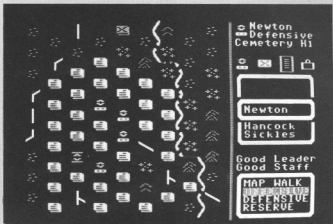
Orders are issued to your units via a series of menus and sub-menus that appear to the right on the screen. The actual orders revolve around objectives on the map. For example, you decide that a certain unit should defend Little Round Top (if you're playing the Gettysburg scenario) and issue orders to that effect. The unit then

strives to fulfil that objective until it receives fresh orders.

The system takes a while to get used to, but is very effective and easy to use after a few games. Added options allow you to decide such things as how brave your Commander should be (heroic, bold, sensible or cautious) or whether to play with hidden or open movement. A series of 'What If' suggestions are also included with the scenario notes. Despite having some-

what limited control over individual units, the game plays well and provides you with a tough challenge. The ability to create your own scenarios makes for long-term enjoyment.

OPPOSITION	07	EASE OF USE	05
DISPLAY	06	GAME DEPTH	07
ACE RATING 830			



● STALINGRAD

CCS

Spectrum

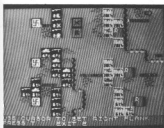
£9.95cs

£12.95dk

The latest Ken Wright game from CCS follows firmly in the footsteps of his earlier works (including *Overlord*, reviewed in *ACE* issue 8) with some subtle improvements.

This solo wargame only allows you to command the German forces of the Army Group South, who historically took part in the campaign which culminated in the battle for Stalingrad.

The game structure follows the usual pro-



cedure, i.e. you issue direct orders to any units you wish, and then the orders are all carried out at once and any combat resolved. Then the computer gets to take its turn and the whole thing starts again. The game continues until either army's effectiveness is reduced to less than 40% or German units occupy Stalingrad, Stavropol and Saratov all on the same turn, or the Russians

manage to take Kharikov or Urepropetrovsk.

Moving during the game is effected by positioning a set of three cursors for each unit, these represent the unit's centre and right and left flanks. The game includes three difficulty levels, plus hidden movement over a large game area with varied terrain. Like the earlier games, *Stalingrad* plays well and the ordering system is easy to use. The scenario is not the most exciting, but the computer opponent's very strong on the highest level and you'll really have to work to defeat it.

OPPOSITION	07	EASE OF USE	07
DISPLAY	07	GAME DEPTH	06
ACE RATING 765			

● PANZER STRIKE!

SSI/U.S. GOLD

C64

£24.99dk

Panzer Strike! is a one or two-player tactical wargame that contains three theatres and a tutorial program on two disks. Once you've decided on a scenario (Africa, Eastern or Western Europe), you then get the choice of which particular battle you'd like to fight. Each battle gives the player an objective to reach within a set number of turns (either 30 or 60 one-minute turns per battle).

The game breaks down into two main phases, the Orders Phase and the Combat Phase. As the name suggests, you give your orders to your units (which are either individ-

ual tanks and guns or squads of men) by accessing a number of menus and sub-menus during the Orders Phase. Then your units attempt to carry out their orders during the Combat Phase. The units will remain in the Combat Phase until you decide to interrupt and issue new orders, or the game ends.



The game has a variety of options including the option to let the computer handle certain portions of your forces, while you control as many or as few pieces as you wish. There's also a design option included that allows you (or the computer) to generate your own maps. *Panzer Strike!* is a sophisticated game that takes time and effort to play well, and unless you're well acquainted with how wargames work, you're better off sticking to something a little less complex.

OPPOSITION	08	EASE OF USE	05
DISPLAY	06	GAME DEPTH	07
ACE RATING 795			

GET INTO CRIME!

In the late 1990's the streets of New York are a jungle. You are the ice cool leader of a gang of drug crazed terrorists. Your main goal is to become the richest, toughest and most notorious gang in the city.

**DARE YOU
PLAY.....**

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SEND YOUR NAME AND ADDRESS TODAY FOR YOUR FREE TRIAL OF
IT'S A CRIME THE WORLD'S MOST POPULAR PLAY-BY-MAIL GAME

Write to: -

KJC GAMES, PO BOX 11, CLEVELEYS, BLACKPOOL, LANCs FY5 2UL

SPINDIZZY

Anyone wanting help with the great game we gave away with Issue 10? Read on.

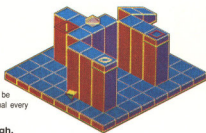
Spectrum version: First load the game until the title screen appears. Reset the computer and rewind the tape to just before the BASIC and MACHINE CODE loaders for the loading screen (you might need to practise this a couple of times before you manage to get the right place) then type in the listing and RUN it. Now continue loading the game. Once loaded you'll now be able to accumulate a time of up to 150 before it stops, regardless of how many times you smash up GERALD.

```
10 CLEAR 24831: LET L=0: FOR F=23296 TO 23332: READ A: LET L=L+A: POKE F,A: NEXT F
20 IF L<4022 THEN PRINT RDATA ERRORS:STOP
30 RANDOMIZE USR 23296
40 DATA 55,62,255,221,33,0,64,17
50 DATA 0,27,205,86,5,243,221,238
60 DATA 1,79,17,0,159,221,33,0
70 DATA 97,205,169,5,251,62,201,50
80 DATA 147,220,195,0,178
```

D.GRIFFITH, London.

C64 version: On the title screen, hold down the keys PAUL together and you'll be rewarded with more extra time than usual every time you enter a new room.

BRETT SIMPSON, Farnborough.



After twelve (including this one) instalments of Tricks 'n' Tactics, you lot must be the winningest bunch of computer players around. We plan to make your next year of games playing even easier too, but we need your support – keep those maps, tips and pokes rolling in. You might just win yourself **SIX** top-rated games for your efforts!

IMPOSSIBLE MISSION II

Some helpful hints to help make the impossible a little more possible!

Before you go charging around Elvin's complex, it's best to know what you're up against and how to deal with it. The most dangerous enemies are the robots who patrol the platforms and guard the objects you need to search. Here's a list of the robots and how to deal with them.



SENTRYBOTS – the most common robots. Touching them is fatal (unless you un-plug the robots temporarily from the computer terminal). Some merely sit in one place, swivelling round and firing their lasers. Others walk (or even run) along platforms. When you enter a room, study the Sentrybots' routes and when they fire. This way you'll know when to jump over them or when they'll fire. Remember that these robots can't use the lifts, so if one is chasing you, run to the nearest lift (remember he can still fire!).

MINEBOTS – you'll find at least one in each tower. It's best to spot these robots early before they lay too many mines. If you're quick enough, you can lay a mine in his path to blow him up. Remember walking into him has no effect!

PESTBOTS – these certainly live up to their name. These robots walk up and down corridors until they meet a lift. They'll then use the lift to move to a platform above or below them. Be careful when using a lift with these around as you may be whisked up to a platform you didn't want to go on. The best way to fool

them is to try and leave them stranded on a platform with no lifts around them. Also, watch out when you step on or off a lift, as a Pestbot may suddenly use that lift and crush you against the underside of a platform.

SQUATBOT – not really robots but more of a trampoline. These funny little things will extend upwards at irregular intervals. You can use these to your advantage by either standing on them to raise you to a previously unreachable object, allowing you to jump to higher platforms, or by jumping from a height onto them to bounce you up quite high. Mind you, don't overlook a Squatbot

which could suddenly spring up and crush you against a platform.

BASHBOT – quite dangerous, especially on high platforms. If you touch this robot, he'll pick you up and drop you off the end of the platform, often with fatal results. The best way around these is to lay a mine on his patrol path. If you're very lucky you can somersault as soon as he grabs you.

SUICIDEBOTS – deal with as Bashbots.

You can get around all the robots in various ways – either by avoiding them, somersaulting over them or turning them off by using the terminal. If you're desperate you could try laying a mine in their path, which will destroy them and blow a hole in the platform.

As well as the robots, time is a great enemy. Those seconds keep ticking away, and should you die you lose six minutes. This may not seem like much but on some screens you'll find yourself dying maybe 10 times before you solve it. A little patience and logical thought will save a few

Advanced Computer Entertainment 85



slices of time on most screens. It's better to spend a minute or two studying the screen from a safe point than to die needlessly through too much haste.

Don't forget what your quest is all about. Each tower has a green safe somewhere which must be blown up with a mine. The safes contain snippets of Elvin's music. Don't get too excited listening to the music. Always stop the tape after collecting one piece, don't rewind or you'll find yourself erasing pieces of music - remember, you can't go back to a tower once you've completed it!

Horizontal lifts can be dangerous. Remember that you must be crouching before you use these lifts. In some rooms you can stop these lifts from moving by trying to stand up. In other rooms the routes that the lifts follow may have dangerous walls blocking you and thus knocking you off. The best way around these is to quickly stand up once you get a lift moving and somersault over the wall section to land perfectly on the moving lift on the other side!

Don't be put off by the look of the rooms. Some of the most devious and deceptive looking rooms can be a cinch. If you enter a room and find the going a little tough, try tackling the room from the other side. Don't forget to use your collected robot de-plug icons once in a while.

Some rooms will be pitch black. Use your light



bulb icon. Don't waste time getting to a terminal in a dark room to activate your bulb because you can use a terminal in a completely different room. Once you do, any darkened rooms in the tower will be permanently lit up.

The PIN numbers are your link between the towers. You'll find them hidden in the objects around the rooms in each of the towers. After you've completed as much of a room as possible then leave it and activate the PIN coder on your pocket computer. Use the arrows to scroll the available numbers into the windows for viewing. If a correct number for the code appears then note this down and scroll that number away. You must do this as the 'FOUND' message will remain on your computer, even if you search the other numbers and find correct or incorrect codes.

As a general rule, keep a watchful eye open and be patient. Keeping your cool and thinking logically will win you the game - after a few hours of practice. Remember you can check back on previous previous towers' progress by dialling up the number on your pocket computer. It will show you the time taken to complete the level (not including deaths). Try and aim for an average tower completion time of sixteen - twenty minutes, but no more than thirty!

MARK STEVENS, Bishops Stortford.

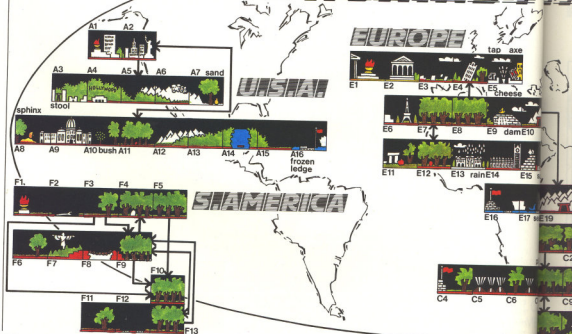
A.T.F.

Here's a monster poke for Amstrad owners who are after a choice of 1-9 lives and the ability to carry a 1-11,000 kg payload.

```
10 MODE 2: MEMORY &1FFF: GOSUB 110
20 CALL &227A
30 PRINT "PLEASE WAIT..."
40 CALL &21FD: X=PEEK(&200A)
50 IF X=110 THEN 100
60 IF X=121 THEN 1010
70 END
80 PRINT "DATA ERROR": END
90 PRINT "POKE ERROR": END
100 PRINT "DECODING ERROR": END
110 RESTORE 180
120 FOR N=&2000 TO &2295
130 READ A$: A=VAL(R&S+A$)
140 POKE N,A: C=C+A: NEXT
150 IF C<> 70832 THEN 80
160 RETURN
180 DATA 00,00,00,00,00,00,00,00
190 DATA 00,00,00,dd,7e,00,fe,c3
200 DATA 20,08,3e,79,3,0a,20,c3
210 DATA 5e,22,af,dd,e5,e1,5,dd
220 DATA 7e,00,fa,b1,20,07,dd,7e
230 DATA 01,fe,20,28,0a,dd,23,11
240 DATA 3c,fe,1c,20,e9,18,30,11
```



THE RACE AGAINST TIME



250 DATA dd,23,dd,23,c6,03,fe,0d
260 DATA 20,05,dd,36,00,19,c9,fe
270 DATA 0e,20,05,dd,36,00,18,c9
280 DATA fe,0f,20,05,dd,36,00,17
290 DATA c9,fe,1c,20,05,dd,36,00
300 DATA ee,c9,dd,36,00,16,c9,af
310 DATA e5,dd,e1,15,dd,7e,0c,fe
320 DATA 23,20,07,dd,7e,01,fe,c2
330 DATA 28,0a,dd,23,11,3c,fe,12
340 DATA 20,e9,18,19,1f,dd,23,dd
350 DATA 23,e5,11,07,00,19,7c,d6
360 DATA 10,dd,75,00,dd,77,01,dd
370 DATA 23,3e,12,e1,c9,af,e5,dd
380 DATA e1,15,dd,7e,00,fe,b4,20
390 DATA 07,dd,7e,01,fe,c2,28,0a
400 DATA dd,23,11,3c,fe,17,20,e9
410 DATA 18,2e,1f,e5,11,06,00,19
420 DATA dd,23,dd,23,c6,03,fe,16
430 DATA 20,0f,7c,d6,10,dd,75,00
440 DATA dd,77,01,dd,23,3e,17,e1
450 DATA c9,7c,d6,10,dd,75,00,dd
460 DATA 77,01,dd,23,3e,16,e1,c9
470 DATA af,e5,dd,e1,15,dd,7e,00
480 DATA fe,02,20,0e,dd,7e,01,fe
490 DATA d9,28,1f,dd,7e,01,fe,d
500 DATA 28,0a,dd,23,11,3c,fe,1f
510 DATA 20,e2,18,2e,1f,dd,23,dd
520 DATA 23,dd,36,00,e9,dd,e5,e5
530 DATA dd,e1,c6,03,fe,11,20,dd
540 DATA dd,7e,0c,d6,10,dd,77,0c
550 DATA dd,e1,3e,11,c9,dd,7e,03
560 DATA d6,10,dd,77,03,dd,e1,3e

570 DATA 1b,c9,e5,dd,e1,dd,7e,1b
580 DATA fe,d,20,1e,dd,7e,1c,fe
590 DATA b5,20,17,dd,7e,00,fe,d
600 DATA 20,10,dd,36,1d,20,dd,36
610 DATA 1e,eb,11,1e,00,dd,19,3e
620 DATA 1f,c9,e5,dd,e1,dd,7e,21
630 DATA fe,eb,20,1a,dd,7e,22,fe
640 DATA b2,20,13,dd,7e,09,fe,d9
650 DATA 20,0c,dd,36,23,0c,11,23
660 DATA 00,dd,19,3e,24,c9,3e,6e
670 DATA 32,0a,20,c3,e5,22,13,21
680 DATA 00,00,11,00,00,00,01,00
690 DATA 00,ed,b0,21,00,00,11,00
700 DATA 00,01,00,10,36,00,ed,b0
710 DATA 36,c3,23,36,13,23,36,21
720 DATA 21,8e,21,11,00,00,01,0d
730 DATA 00,ed,b0,21,00,00,36,eb
740 DATA 21,00,00,11,00,00,01,18
750 DATA 00,ed,b0,eb,36,c9,2b,36
760 DATA 16,13,cd,00,00,dd,21,00
770 DATA 00,21,78,eb,e5,cd,0e,20
780 DATA 4f,06,00,5d,7c,d6,10,57
790 DATA dd,23,ed,b0,ed,73,04,20
800 DATA c3,00,00,ed,7b,04,20,e1
810 DATA 36,88,23,18,d1,21,6b,22
820 DATA cd,54,22,2a,00,20,22,90
830 DATA 21,7c,d6,10,67,22,b4,21
840 DATA 22,1f,21,e5,7c,d6,10,67
850 DATA 22,93,21,e1,2b,2b,2b,22
860 DATA 9c,21,23,22,9f,21,11,09
870 DATA 00,19,22,bc,21,11,10,00
880 DATA 19,22,c4,21,22,23,21,11

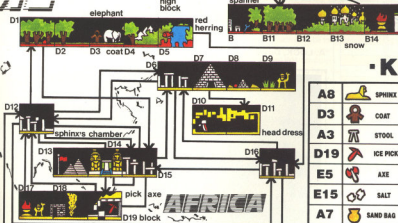
890 DATA 00,10,19,22,c1,21,11,18
900 DATA 00,19,22,d7,21,2a,02,20
910 DATA 22,97,21,13,d9,ed,43,06
920 DATA 20,c3,8e,21,7e,fe,ff,c8
930 DATA cd,5a,bb,23,18,16,e1,e1
940 DATA ed,4b,06,20,dd,22,08,20
950 DATA d9,1b,c9,11,01,0c,44,65
960 DATA 63,6f,64,69,6e,67,11,01
970 DATA 0f,af,cd,db,c6,06,00
980 DATA 11,00,40,cd,77,bc,e5,d5
990 DATA e1,22,00,20,c5,e1,22,02
1000 DATA 20,e1,eb,c3,83,bc
1010 PRINT CHR\$(7)
1020 INPUT "No. of lives (1-9) " : i
1030 INPUT "Weight, thousands
(1-11) " : we
1040 RESTORE 1160
1050 FOR A=AB8E0 TO AB9F
1060 READ AS: A=VAL ("S"+AS)
1070 POKE N.A: D=D+A: NEXT
1080 IF D>=3134 THEN 90
1090 POKE B&B9F: we=we*1000
1100 POKE B&B94: we=256*INT (we/256)
1110 POKE B&B95:INT (we/256)
1120 PRINT "PRESS A KEY."
1130 CALL AB168: CALL AB&B0
1140 END
1160 DATA 3e,c3,21,8e,bc,32,4f,9e
1170 DATA 22,50,9e,c3,cc,9c,3e,03
1180 DATA 32,bc,06,21,70,17,22,37
1190 DATA 31,3e,18,32,c0,01,fb,c9

MIKE WONG, Sale.

TIME



USSR
ASIA



KEY

A8		SPHINX	D14		SPHINX'S CHAMBER
D3		COAT	B13		SNOW
A3		STOOL	B3		ON THE HIGH BLOCK
D19		ICE PICK	A16		TO BREAK FROZEN LEDGE
E5		AXE	A10		TO CHOP DOWN TURN
E15		SALT	C7		TO MAKE PLATFORM RISE
A7		SAND BAG	D19		PUT ON BLOCK
B10		SPANNER	E5		TAP NEXT TO FOUNTAIN
E9		CHEESE	D3		DROP NEXT TO ELEPHANT
D5		HERRING	E17		DROP NEAR SEAL
C3		UMBRELLA	E9,13		ON LEAK AND USE IN RAIN
E18		PLUG	E9		ON LEAK IN RAIN
D10		HEAD DRESS	D18		SAND STORM

AUSTRALIA

SUNDOG

Some tips for F.T.L.'s first game on the ST.

List of cities and trade goods:

SYSTEM	PLANET	CITY	GOODS
Jondt	Jondt	Drahew	Animatter
		Oddburg	Art Objects
		Exposito	Bo Chips
		Danilton	Carcases
		Draining	Chronographs
	Heavy	Lightening	Clothing
		Pl Ligon	Comgear
		Pl Savon	Droids
Laher	Tarna	Jewel/Temow	Exotic Metals
		Store1	Fruits
			Vegetables
Glory	Glory I	Lagosa	Fury/Sibs
		Abrun	Gems/Crystals
		Abrun	Gold
		Paran	Grain
			Cereals
		Conan	Handweapons
	Glory II	Flethe	Meats
		Gennex	Mulgars
		Jemba/Loth	Organics
	Glory III	Dak	Pharmaceuticals
Shoot	Shoot	Shoothan	Radioactives
		Knuth	Rare Earth
		Tenionton	Seeds/Sprouts
		Wakal	Spices/Herbs
New Shoot	New Shoot	N'Waxal	Silichips
		New Tonal	Stock Embryos
		Wilders	Stimulants
		New Shoothan	Sunsums
		Travell	Synthesizers
		Edwold	Woods/Fibres
	Heil	Sheed	
KolMan/Dsa	Kals	Man	
		Das	
		New Doyas	
		Chalner/J	
Sosai	D'Hetro	N'Jones	
		J'belton	
		N'horder	
Worem	W'orad	Sheshco	
		Ayika	
		Zadensa	
		Alan	
Jadul	Krakonos	Malest	
		Idono	
		Polabo	
		Dregat	
Ferr	Ferr	Ferring	
		Loran	
		Barnum	
		Barlin	
	Fermyack	Industroton	
		The Mines	
		Snowball	Icebox
Enle	Enkan	Plays	
		Tule	
Hesah	Hesah	Adensar	
		Welan	
		Exost	

(*=Starport)

Solving the game:

1. Refuel and repair the ship (don't buy auxiliary fuel) and then withdraw all your money from the bank. Replace all worn out parts in the ship with shunts and buy replacements for all unshuntable parts.
2. Take off from Jondt and warp off for the planet Worem in the Worem solar system.
3. Head for the nearest bar in the starport (take the space buggy, but park legally!) The reason for going to the bar is simple, Worem is the best planet to go to to obtain illegal goods. Ask the barman for information about a cloaker and a ground scanning device. Buy these two pieces of equipment.
4. Head back to your ship and replace the cryofuel in the force shield for the cloaker and replace the scanner in the pilotage with the ground scanner. The cloaker makes you invisible to attacking ships, while the ground scanner lets you see hidden cities.
5. Buy as much as you can and fly to another city by choosing the navigable and then the city to city option. Now, sell everything you have and head for the warehouse.
6. Check out the warehouse for cryogens. Collect cryogens only, before setting off back to Jondt.
7. Buy a lot of food before going into the wilderness in search of the 'lost colony', known as Banville center. Once found, the ground scanner will store its location for future use. Visit their warehouse to find out what they need, and store your cryogens there.
8. From now on it's a matter of flying around, seeing what Banville center needs and picking up your well-earned credits and cargo.

A. LOCK, Dover.

GAMES! GAMES! GAMES!

Don't sit there moaning about the price of software, send your maps, tips and pokes to Tricks 'n' Tactics and win yourself loads, for FREE!

This month's 'Tip of the Month' prize goes to Gary Marr, who wins himself a copy of *Dark Side*, *Action Force II*, *Bionic Commandos*, *Earthlight*, *Target*; *Renegade* and *Venom Strikes Back* for his Spectrum. Pretty good huh? The other prizewinners include D. Griffith, who wins a copy of *Dark Side*, and Brett Simpson and Mark Stevens, who win themselves copies of *Bionic Commandos*. Mike Wong's monster poke earns him a copy of *Dark Side* for his Amstrad and A. Lock wins himself *Virus* for his ST. There's nothing to stop you winning a prize either, so get those pens moving and send those red-hot tips to:

**TRICKS 'N' TACTICS, ACE
4, QUEEN STREET
BATH
BA1 1EJ**

ZARCH

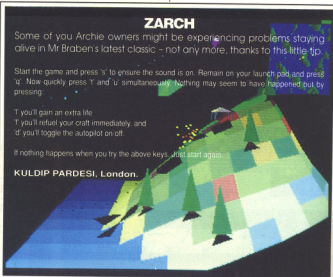
Some of you Archie owners might be experiencing problems staying alive in Mr Braben's latest classic - not any more, thanks to this little tip.

Start the game and press 's' to ensure the sound is on. Remain on your launch pad and press 'u'. Now quickly press 'y' and 'u' simultaneously. Nothing may seem to have happened but by pressing:

- T you'll gain an extra life
- T you'll refuel your craft immediately, and
- T you'll toggle the autopilot on off.

If nothing happens when you try the above keys, just start again.

KULDIP PARDESI, London.



Is a ZX81 more fun than an ST or Amiga? Is there computing life down under? Are human-vs-computer games obsolete? Readers pose the questions, and ACE letters ed Andy Wilton fields them.

Do you know better? Then write and tell us about it. You could see your views in print and maybe even win yourself some software into the bargain – so get your pens out! Address your biting wit and pithy observations to

ACE Letters, 4 Queen Street, Bath BA1 1EJ.

AN EXPERT SPEAKS...

I am writing in reply to Nicholas Kingsley's letter regarding the merits of the C64 in relation to the Amstrad and Spectrum.

As a games programmer working across all formats, I feel I am in a good position to comment on his letter.

First of all, the C64 is a relatively slow machine in comparison to other 8-bit micros. If you look at games which don't make excessive use of hardware sprites, the Spectrum and Amstrad are far superior in a lot of cases. A good example are vector graphics games such as Elite. When it comes to processor-intensive routines a 3.5-4 MHz Z80 leaves a 1 MHz 6510 standing.

More memory doesn't always mean better games. It's how the programmer uses the available memory, and anyhow the C64 often uses more instructions – and hence more memory – to complete a task than would be needed on the Spectrum or Amstrad.

When it comes to C64, Amstrad and Spectrum comparisons, each has its strengths and weaknesses. There's the slow processor of the C64, lack of colour of the Spectrum, and the excesses of screen RAM used by the Amstrad. However, if I were to write a scrolling shoot-em-up the 64 is the ideal machine. I would prefer to do a wireframe graphics game on the Spectrum and a game with fancy backdrops on the Amstrad.

So you see, it all boils down to what you want your machine to do.

Andrew Whittaker
Hull

Too right it does. Will all the 8-bit owners now stop arguing amongst themselves please? It's bad enough having to put up with the ST and Amiga owners slugging it out, for goodness' sakes!

APPLES DOWN UNDER

I must confess that my curiosity has finally got the better of me, and prompted me to write this letter. Is it possible that the Apple II family of computers haven't found their way to your shores as yet? One occasionally reads about the odd Macintosh, but (correct me if I'm wrong) since the first issue of your excellent magazine, I haven't seen one word about the Apple II's. Why is this? Surely it is not because they are considered to be too expensive, when you carry reviews of Amiga, Atari and IBM computers.

Perhaps you have some justifiable dislike for Apple II's, or maybe you haven't yet discovered the joys of using an Apple II GS for yourself.

It would surely be better if you went as far as saying that Apple versions of the programs reviewed were available (where applicable).

As a closing note, one piece of trivia. Did you know that Sega make a conventional 64K computer, as well as the Master Systems machine? This letter is written on mine, which I keep as a second computer. Even though it is now ancient (4 years old), I still find some applications better on it than my 1 Megabyte Apple II GS.

John Thornley
North Parramatta, Australia

The Apple II's reached the UK sure enough, John, and there's certainly no dislike of the thing here at ACE. Personally, I learned BASIC on one of the little beauties way back in 1980 and have nothing but the fond-

MORE FUN WITH AN '81?



Computers now play a major part in my life – not just playing games! I enjoy music and programming and have done so for about 5 years. I started with a ZX81 progressing to a Spectrum, Spectrum +, Commodore 64 and now an Atari 520 STFM. You can see the progress from a very basic computer with no sound or colour to one with sound and colour and UDGS, then to better sound, graphics and more memory and finally to one with superb graphics sound and 'loadsa' memory.

The point I am making is that I had more fun with my old ZX81. It may have been drab, although not then, but it was exciting, exploring the language, making simple games that were only ever seen before on those LCD things. Now I have a computer that plays music and has graphics (if digitized) that might get confused with the TV.

Don't get me wrong, I'm pleased I upgraded, the word processing, graphics and advanced programming languages helps with my GCSE no end. All I'm saying is that my first computer was so much more FUN because it was a new world to me, especially when I was only aged ten!

Matthew Miles
Maidstone

It's true, folks — the ZX81 really was more exciting. Remember the incredible delight when you got a Basic version of Break-Out running? Remember the abject misery of losing the whole (unsaved) thing because of that dreaded RAM-pack wobble? It brings a lump to my throat, I don't mind admitting.

ACE • LETTERS

ADVANCED COMPUTER ENTERTAINMENT

est memories of the machine. Why the low profile in the mag then? Well, although the Apple II may have rivalled the TRS-80 and Commodore PET for the market lead way back at the start of the decade, the price breakthroughs of 1981-2 pretty much finished it off in Britain. The BBC Micro won over the hobbyist side of the market with its higher spec and lower price, while machines like the Commodore VIC 20 and Sinclair Spectrum offered leisure computing at a fraction of the cost. Apple never cut their prices enough to stage a comeback, so the II stayed a minority machine here.

Incidentally, we were fascinated to hear about the Sega micro. We're fairly sure it's never been released here, but Japanese micros rarely do well in the UK market so that's no great surprise. Any chance you could send us a photo of it?

TEACHER'S PET

I am writing to you on the subject of ACE, Advanced Computer EDUCATION. Five years ago we were looking forwards to a future where computers were an integral part of a student's learning. Now, five years on, our schools are still using the same BBC Model Bs and much of the same software. I am not, you understand slugging off the Acorn flag-ship, as in many ways it is the perfect learning tool. I am, however, increasingly disheartened by the uses that these machines are put to.

When I first came into contact with computers at high school, I was taught by Peter Cook of *Tau Ceti* fame. These lessons were spent

crowded around a Commodore PET playing *Pong*, you know the sort of thing, buying and selling crops to keep your people alive, or sitting at a Beeb playing a thousand and one variations of noughts and crosses. My O'level years were no better.

If computers are to fulfil their full potential then the education authorities should wake up to what is going on in the computer world today.

With the coming of the 16 biters budding artists and musicians will really be able to show off their wares. Professional looking English work can be handed in thanks to powerful word processing packages now available, and information retrieval could become an exciting exercise with the aid of a modem and a phone line.

Many people will use the excuse that there is not enough money to waste on luxuries like computers. Computers are not a luxury; they are a necessary part of everyone's future, and the present, and must not be ignored if this country is to survive.

Education clubs please take note, and do not leave it to the likes of this publication to educate the youth of this country.

Simon Sullivan
Leicester

To give the education folks their due, keeping up with advances in computing must be a nightmarish task—and not just financially, come to that. Updating computer equipment is expensive of course, but training teachers and building facilities takes time, no matter how much money you throw at the problem.

IN THE RED OR IN THE PINK?

We have decided to set up a fanzine for the Amiga, the Archimedes and IBM PC. It will be inexpensive (not cheap—this makes it sound poor quality), as we feel that support for these machines is too expensive for many people to afford (like us!).

The reason that we write is that we thought that you may be able to give us tips on how to get support for the magazine (e.g. how do we convince software companies that we are genuine, and not trying to rip them off?).

M A Tyson and P J White
Sheffield

Inexpensive is one thing, but running a fanzine at a loss probably

THE EMULATION GAME

After reading a letter from an obviously very confused person called Matthew Larreta I discovered in my public domain software catalogue a program called "Amiga Emulator". Please could you try this and, if it works, tell the world!

Actually if you think (and know) about it, compatibility is all the rage just now. There is disk software for the Archimedes which emulates the IBM PC. No need for the 310M anymore. Also on the Archimedes is "Beeb to Arc" which lets the Archimedes run BBC programs.

Everyone knows about SAM the Spectrum clone, and now Betasoft have released a programme letting the Amstrad CPC run Spectrum Basic! In fact I fancy that someone will have a go at making the Amiga run C-64 software via external 5.25in disk drives.

Scott McNab
Edinburgh

Sadly we can't try the Amiga emulator on your PD list, Scott, because it needs an ST with (amongst other things) a blitter. Like most users — and the PD group whose list you sent us, come to that — we don't have any blittered STs. That said, I find it hard to believe that the program can work or that anyone could have meant it to: the hardware and copyright problems are simply too large. I've seen an "ST emulator" on one of the Amiga Fish PD disks, but that just put up a fake GEM Desktop and then gave error messages every time you tried to do anything. Presumably the emulator you've spotted does much the same thing the other way round.

Could you give me the address of ROBTEK as I wish to know more details about their C64 Emulator for the Amiga. Do you know anything about this product?

J.J.Hocking
Truro

Robtek's C64 Emulator is now available (make sure you get version 2) and costs £69.95. The company claim it will allow you to transfer files from one system to the other and store your C64 data on 3.5in disks. They do point out, however, that the emulator's interpreter is rather slow, so it's probably not suitable for trying to run C64 games software on the bigger machine. You should be able to transfer word processing files and suchlike however with little difficulty. The product should be in the shops, but in case of difficulty try Robtek on 01 847 4457.

isn't such a good idea. You'll be charging more for postage than you will for the fruits of your labours, and that seems to be selling yourselves short. I'd advise you to cover your costs at the very least. After all, you're giving readers enough by producing the 'zine: they'd hardly expect you to subsidise them into the bargain.

Getting software to review will be a major headache. A copy of the 'zine may help persuade software houses that you're genuine but these are suspicious times that we live in, and in any case that still leaves you with the problem of getting software for issue one. Things might be easiest on the Archie side, where conventional magazine coverage is so much harder to come by: on the PC and Amiga, perseverance is the only way.

BLURB BASHING

'Alone amongst the people of Zargon, a planet trapped in the fear-

ful Shadow Dimension, you have been chosen to battle in single combat with the sinister Sentinel and his henchmen the Sentries, evil entities from the Depths of Quanderstop. Lightning-fast reflexes and cunning strategy will be needed to avoid the obliterating gaze. Your Synthoid bionic life support module has the powers of creation and destruction: these are your weapons in this struggle for mastery of the Universe of 10,000 landscapes. Zargon depends on you...

What a pity Firebird didn't give Sentinel a really exciting sci-fi introduction like that. It would have made the game so much more tense and thrilling to play, wouldn't it? Just the thought of all those Zargonites depending on you would have been so inspiring! One false move and a whole planet-load of really nice folk go down to the Depths of Quanderstop forever. What a prospect. And then think of that horrible nasty Sentinel going down the



booster (The Quanderslop Arms) and spending all evening gloating over your failure with his evil cronies. You'd really want to go back and wipe the smile off his face, wouldn't you?

Or, perhaps, Firebird are merely demonstrating that a game with clear graphics, brilliant, atmospheric sound, quick and simple controls and, above all, a strong innovative concept, just doesn't need all the usual claptrap about life-and-death missions and malevolent adversaries.

You don't have to tell me the Sentinel is evil: after a few plays I started to get a cold chill down my spine every time I saw him, even if he had his back to me. I didn't need to read about it on the cover.

Thank you Firebird. Sentinel is elegant, austere, a timeless classic, and to dress it up in the familiar trappings of technofantasy glitterburr would have been unworthy of a superb game.

Chris Bishop
Camberley

PRACTICAL APPROACH TO PIRACY

Debates about piracy are all very well, but have little value and do not go very far to answer the points which are raised.

It is now time for ACE and associated magazines to conduct a questionnaire to show just how software copying affects the industry. Questions should include ones such as:-

- How much original software do you own?
- How many copies do you own?
- How many of the copies are from budget ranges?
- Have you ever contacted or been contacted by any means by hackers?

Of course the questionnaire would have to offer complete anonymity to those who answer so no prizes could be given. When this has been done the true effects to the software industry can be calculated, instead of us simply having to put up with vague statements like 'Software's too expensive, so I copy it?' and 'Pirates are ruining the industry and keeping the price of games up.'

David Fairweather
Blackburn

It's a great idea, David, but has one small flaw. Supposing the survey showed that piracy was not the problem we all thought it was. Everyone would suddenly think that, if it's not a problem, let's do it and there are no prizes for guess-

ing what THAT would mean...a serious piracy problem, right?

MODEM MUSINGS

From the lowly 2% of modem owners, I would like to say THANKS. Your section in the July issue was what I personally have been waiting for for a long time. I am an old hand at MUG's, having been brought up with MUD version 1. This used to run on a DEC system 20 at Dundee College of Technology before the system was replaced by a series of VAXs. For a year I have been frantically searching for MUG's (NOT people) that a lowly student like myself could afford - and you give me a list of SIX FREE ONES!

I immediately broke out the old acoustic modem (ancient, huh?) and plugged it into old Arnold which, Nicholas Kingsley from Chichester, has 128K of memory and can run ELITE faster than your C64 can! (OK, OK, get on with it, Ed.). For that matter, even a humble Speccy can run Elite faster than a... (Aaghgh!) Back to my story, however.

Seconds later the software was configured and I was dialling frantically. I managed to get a free line into *Mirrorworld*, but the host computer didn't respond to my attempts to log into it. 'Oh well,' I thought, and tried again. I eventually gave up and tried some of the other MUG's listed. I'm still trying. Can anyone help? Has anyone got a cheap modem they could sell a poor student?

Duncan Whyte
Dunfermline

Does anyone on the ACE team know of a modem for the ST that will let me play UK MUG games, access bulletin boards etc and cost under £100?

Chris 'Woody' Wood
Hackney

News on modems coming up in a future issue. Stand by...

AIR TRAFFIC CONTROL

I work as an air traffic controller on quite a busy airfield and the work can get rather exciting, to say the least. As a result, I read the reviews involving aviation simulators with added interest and looking at the latest release for the Amiga there is certainly a winner in *Interceptor*, and it sounds as if there are a few good combat simulators coming out for other machines as well. But what about the ST? Is there anything on the horizon for the ST which is comparable to *Interceptor*? I hope the software houses are in the process of producing a package which is at least as good. Do you know of anything?



● The F16. When can ST owners expect a program as good as *Interceptor*?

Lastly, could you tell me which of recent adventure releases have moving graphics and a gameplay comparable to *Dungeon Master*. It may sound like sacrilege to the old faithfuls that consider text-only adventures to be the ultimate in adventure, but having battled with *Dungeon Master*, the *Pawn*, and *Silicon Dreams*, I enjoyed DM the best.

Phil Anthistle
RAF Gutersloh

There are currently no plans to convert *Interceptor* to the ST, but I

shouldn't worry if I were you - the rising flood of 16-bit titles is bound to come up with something in the near future.

As far as adventure, have you tried the *Bards Tale* series? Although not nearly so sophisticated as DM, they do offer considerable enjoyment value - especially the latest in the series (see page 72). Role-playing software is rapidly becoming 'flavour of the month' in the USA, so it's highly likely that there will be numerous releases in the DM style over the next couple of years.

ON THE DRAMPAGE

You stated in issue 11 that the Atari ST and Amiga are now the same price, £399, but just cast your mind back to March this year and ask yourself why Atari should announce in advance a forthcoming price rise of £100 as from 1st May 1988?

The answer is simple, they wanted to shift their existing stocks of single sided drive machines to

PHONE-EM-UP FRENZY



Is the time now approaching when man against machine will be a thing of the past and man against man will be as it has always been; the ultimate challenge. And regardless of what you use whether it be leg power, rackets or footballs, competing against another human is THE ULTIMATE CHALLENGE. So where does that leave computing?

ACE are the only people who seem to be taking the future of games seriously with their previous articles from America etc on multi-user programmes.

People have matured since the advent of the ZX81; regardless of the type of computer they own, they still compete with the programmer and the time has come when this will be a declining interest.

What I'm getting at is that the technology for multi-user games is here. The thought of competing with fellow adventurers in a game like *Elite* either by modem or network or even using cable TV communications is exciting, not just YEAH! this is good, but GOD THIS IS WHAT WE HAVE BEEN WAITING FOR!

There is no greater thrill than competing with an opponent who will do the unexpected, who will use cunning and illogical acts in a desperate bid for ultimate victory. Computers do not even come close with their set programs and the same gameplay every time they are loaded up.

ACE has given us a glimpse of the future, multi-user games are the future.

We await the death rattle for single games and the birth of the true computing challenge.

Stephen Donaldson
Glasgow

You're a man after my own heart, Stephen! For my money, multi-user games like *Genie's Air Warrior* are just about the most exciting thing on the computer entertainment scene. They offer brand new kinds of gameplay, with complexity and intrigue that single-player games will never be able to match. In its way, *Air Warrior* is as fundamental an advance on what's gone before as *Space Invaders* or *Classic Adventure*. Now when are Britain's communications and games industries going to take up the challenge?

the retailers and I am reliably informed that they despatched 30,000 machines at the old price before the deadline.

This allowed the new production lines of double-sided drive 520s to take over unimpeded. The summer pack was announced, and I would suggest that it was the 22 'free games' that accounted for the price rise and not the DRAM chips.

I would also suggest that not one person in the UK has paid over £299 for the basic 520 STFM simply because so many retailers have so many old-priced machines to get rid of.

The summer pack offer expires on 1st September 1988 and Atari have already stated that they expect the DRAM shortage to ease by then. This leads me to believe that from that date the official price will come down to £299 again, including the new drive and possible software and a joystick too.

All this is very bad news for the Amiga, because while retailers are working their butts off to shift 30,000 ST's, they won't be selling many Amigas, will they?

R.J.Lattimore
Hayant

Interesting theory, Mr Lattimore. In response to your letter, Atari spokesman Peter Walker says: 'There has been no official announcement regarding a reduction in price on the ST from the current £399 level. We don't claim that the total £100 was due to DRAM prices, but the market is driven by 'price points'. DRAMs might have pushed the price to, say, £369, there isn't a lot of difference to a consumer between that and a price point of £399. Selling at £399 enables us to offer more and make the package more attractive to everyone.'

BITS AND PIECES

Snippets from this month's mail...



● The Super Cray - the best games micro of all? Where do you draw the line?

MY MACHINE IS BETTER THAN YOURS DEPT...

On the Atari vs. the ST: '...Neither is State of the Art – a machine that's available to the public will always be someway behind the leading edge of development.' G.P.Evans, Johannesburg

On which is the best computer: '...The Super Cray is. OK, I'm kidding, but the best micro has to be the ONE YOU BOUGHT – because you're daft if you bought one that you thought wasn't the best and weren't happy with.' Rashid Mhar, *Manchester*

'My machine is better than yours letters' have bored me for years." (followed by two pages of 'my machine is better than yours' letter). Name withheld for humanitarian reasons.

'Come on! Someone tell me

know there will be people out there shouting their own opinions, but I want FACTS! Both these machines are computers. Consult the Pink Pages Upgrade Pages for further detail. Other facts include: both machines run software, both machines come in plastic boxes, both...OK, Mr Inghs of Carshalton, we guess we've made the point...

NO TRY - NO BUY?

'Part of my problem is that no shop will load a game so that you can try before you buy. I asked a salesman why this was and he said his time was worth more than the game. At £20 and one minute's loading time, that puts him on £1200 an hour.' I.Wood, Coventry

'If people w

before buying it, the benefits would be twofold. First, they would have a chance of buying a better game instead. Tom Hall, purchaser of a certain hyped game that turned out to be rubbish.

LOONIES
'I was wondering if you could tell me if a logic-bomb would work on a Spectrum +3. If it would, please could you tell me the listing for one?' Anon.
Here is your list: \$5 → X / X (oops!...phut!...oops!)

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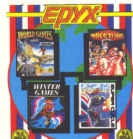
Version	RRP	ACE price	Order code
arcade game			
Spectrum cass.	9.95	7.95	AC160SC
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CBM 64 disk	12.95	9.95	AC160CD
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Amstrad disk	14.95	11.95	AC160AD

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arcade game			
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CBM 64 disk	14.99	11.95	AC136CD
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Amstrad disk	14.99	11.95	AC136AD
Atari ST	19.99	15.95	AC136ST



CALIFORNIA GAMES

US Gold/Epyx

The best Epyx sports simulation yet. And that's saying something.

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Spectrum cass.	8.99	6.95	AC135SC
Spec+3 disk	12.99	9.99	AC135SD
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CBM 64 disk	11.99	8.95	AC135CD
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Amstrad disk	14.99	11.95	AC135AD

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US Gold

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Version	RRP	ACE price	Order code
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CBM 64 cass.	9.99	7.95	AC173CC
CBM 64 disk	14.99	11.95	AC173CD
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Titus

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Atari ST	24.95	19.95	AC172ST
Amiga	24.95	19.95	AC172AM

OFFERS

F/A-18 INTERCEPTOR



AMIGA TITLES

(In addition to those elsewhere)

Jinks is an incredible addictive bounce-em-up. World Games is the Epyx sports classic. Hardball is a great baseball simulation. Leaderboard the definitive golf simulation. Interceptor is a superb combat flight-sim.

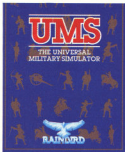
Version	RRP	ACE price	Order code
Jinks	24.99	19.95	AC155AM
World Games	24.99	19.95	AC108AM
Leaderboard	24.99	19.95	AC107AM
Hardball	24.99	19.95	AC102AM
Jinxer	24.99	19.95	AC109AM
Wobball	24.99	19.95	AC106AM
Interceptor	24.99	19.95	AC160AM

IBM PC TITLES

(In addition to those elsewhere)

These leading games should also run on Amstrad PCs and other compatibles. Elite is the definitive space trading and combat game. Tomahawk is a sophisticated flight simulator. Hardball a great baseball simulation. World Chess Leaderboard the definitive golf simulation. Jinxer is an adventure. UMS a wargame. Tetris an addictive puzzle.

Title	RRP	ACE price	Order code
Elite	24.95	19.95	AC165PC
Tomahawk	24.95	19.95	AC160PC
California Games	19.99	15.95	AC135PC
World Leaderboard	24.99	19.95	AC151PC
Hardball	24.99	19.95	AC152PC
Jinxer	24.95	19.95	AC139PC
UMS	19.95	15.95	AC140PC
Tetris	19.99	15.95	AC153PC



ATARI ST TITLES

(In addition to those elsewhere)

Don't miss the incredible Olds and Dungeon Master, both ACE RATED in the high 90s. Leaderboard is the definitive golf simulation. UMS an innovative wargame. Wobball an addictive, original bounce-em-up. Epyx on ST an incredible-value compilation of three hit titles.

Version	RRP	ACE price	Order code
Arcade Force 4	24.99	19.95	AC147ST
Epyx on ST	24.99	19.95	AC154ST
Carnier Command	24.99	19.95	AC196ST
Olds	19.99	15.95	AC148ST
Dungeon Master	24.99	19.95	AC149ST
Slapshot	19.95	15.95	AC150ST
Wobball	19.95	15.95	AC109ST
California Games	19.99	15.95	AC135ST
Leaderboard	24.99	19.95	AC107ST
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VINCE CLARKE

VINCE CLARKE has been a pioneer in the use of computers in music. They've given him No. 1s with four different bands...



Vince Clarke - making music with the Beeb.

Vince Clarke's work with Depeche Mode, Yazoo, The Assembly and more recently Erasure has always involved computers in one form or another. A few years ago he was a pioneer in taking up the UMI2B system based on the BBC Micro and a MIDI interface. Now, with a BBC Master Series and the latest version of the UMI hardware and software, some may say he's technologically a little behind, since the Atari ST's built-in MIDI port has allowed it to dominate music making for the last couple of years.

But you can't argue with success, and the fact that we were interviewing Vince and his Beeb on stage at the Hammersmith Odeon when most ST users are still working in their bedrooms is pretty hard to ignore.

During his days with Yazoo (with Alison Moyet on vocals) Vince was using two huge Fairlight Computer Musical Instruments, and fought shy of taking them on stage. 'If they worked, they sounded just like a backing tape, and if they didn't work or got damaged, it would have cost a lot of money. So in the end we went for an eight-track backing tape.' But with the development of MIDI and smaller, reliable synth modules, Vince has been able to make Erasure entirely live, and isn't too worried about the Beeb crashing on stage. 'There's a lot of smoothing on the power supplies so that's not very likely. In any case, the UMI takes power from the same source as the PA so if it goes, the PA's probably gone as well.'

How does Vince use the computer to compose songs? 'Well, I don't compose on the

sequencer as such - I usually compose on the piano and work out some chord passages, then put a selection of them into the sequencer and chain them together to form a song. Although I'm not much of a keyboard player, I don't have to enter everything in step time because I can play in real time and use the micro editing facilities on the UMI. I don't mind which keyboard I use because the velocity and aftertouch parts can be put in afterwards as well.'

In fact Vince usually uses a Casio CZ1000 as a master keyboard, and his Fairlight has fallen into disuse. 'It's really been left behind by all the new samplers like the Roland S550, so it's not even set up at the moment. The Series III Fairlight's good if you can afford it though...I've just moved to a new house where I'm building a studio so I'll be able to get the Fairlight set up again.'

Vince's latest excursion into the world of sampling has been with the Roland S55, a keyboardless rack mounted version of their pro-level S50 keyboard sampler. 'We got it just in time for this tour, and we're using it mainly for drums. I looked at a few samplers before this tour because until now we've been using four drum machines on stage - you never seem to get one drum machine which has all the sounds you want, so we had the bass drum off a Roland, the Latin percussion off a Yamaha, and so on - it was getting a bit ridiculous.'

So is it easy to set up a new kit of drum sounds on the S550?

'I don't find it all that easy at the moment, but I've only just got hold of the machine! Usually I compose the drum parts straight into the sequencer, although there are different ways of going about things. For instance, on one of the tracks off the latest album we used all the demos from the drum machines, taking the best patterns from each one. Some of those demos must have taken days, there's some very subtle programming in there, so why not use it?'

Vince likes to use a selection of synths from different manufacturers to give him a wide variety of types of sound. This year's favourite has been the Roland D50 (in its D550 rack mounted form). 'We had a few problems with keyboards on tour so we decided to rationalise for this one. I've been messing about with a variety of synths and I wanted to have a fairly wide selection to get a good variety of sounds, because if you have too many modules of the same type of synth everything sounds the same. It's just to get a bigger sound, which is very important - I don't think you can get a rich sound from just one manufacturer because all their synths tend to sound the same.'

Vince's only keyboard synthesizer, the



Roland D50 - in Vince's line-up, and just about everyone else's.

only one he plays live during the act, is the traditionally analog Juno 106, while the \$550 sampler and D560 which uses LA synthesizer sit behind him in a 19-inch rack. There's also a pair of analog Super Jupiter modules, a Prophet VS module which is a digital synth with analog filtering, and a pair of large Oberheim Xpanders on a keyboard stand. Everything's linked by MIDI Thru sockets, the BBC micro with a 3.5in disk drive sits close to hand to Vince's left, since he has to load a new set of data after each song.

Ensemble's other half is, of course, singer Andy Bell. Both Vince and Andy are playing MIDI horns on the tour, and there are two backing singers who, like Andy, are well-rehearsed in disaster procedures should the sequencer or any of the synths go down. 'On one date in Scotland the sequencer went down towards the end of a song. I picked up a guitar and played along to the end, and I don't think anybody noticed the difference. The backing singers have instructions to carry on whatever happens, and Andy's not the sort of guy who'd stop singing just because all the synths packed in! On another occasion the Oberheim Xpander packed in - we could have carried on without it, but unfortunately it was programmed to play a lot of important bits - like the intros to songs! Because everything's connected with MIDI. Thus it killed all the synths after it in the chain. I had to take it out, and I spent the rest of the evening changing the MIDI channel on the Juno 106 to play the intros. I don't think I played anything by hand for the rest of the night!'

Ensemble's concert set includes songs from all the albums so far - 'We've almost got a whole set of singles now', adds Vince - and is accompanied by a MIDI-synchronised light show. That idea developed from using the Roland MPU-101 MIDI-to-CV interface, which is a four-channel unit which has a little LED to show when each channel is going off. I had an interface built which converts MIDI notes to gates. If I want a light to fade in, the face is programmed into the lighting desk and my gate output just starts it off. I just write all the lighting data on one track of the sequencer'.

Vince's custom MIDI-to-Light units sit in his 19in rack with the other modules, and certainly helps add a different dimension to Ensemble's stage shows. But it's impossible to avoid the impression that Vince is keen to get the tour finished and get back to work on setting up his new studio. I want to be able to have everything connected at once, all the old analog synths and drum machines and the Fairlight. I composed for years with an MC4 sequencer driving a load of monophonic synths - and I want to build up a good collection of drum machines as well, not to sample the sounds but to run them all together. You can't have too many drum machines!

Vince's career seems to indicate that chart success doesn't necessarily depend on having the most expensive and up-to-date instruments. True, he did use the very expensive Fairlight for a while, but his current setup and certainly his brain, the BBC micro, are not too far removed from what any of us could afford to install in our bedroom studios.

UK ELECTRONICA '88

Since we're dealing with computer music here, it might be as well to give a quick preview to the only show in the UK that provides a showcase for amateur computer musicians - UK Electronica.

The show's been running in the North of England for six years, but UK Electronica '88, held in St John's, Smith Square, London SW1 on Saturday September 3rd, has moved to London so the show can be made more spectacular than ever. It's being sponsored by synthesizer manufacturers Roland UK, who are laying on much of the barrage of electronic equipment needed.

The headline act for UK Electronica '88 is Michel Huygen, who usually records under the name NEURONIUM. Hailing from Barcelona, he was born in Belgium, brought up in Africa, speaks five languages and makes a living composing film and TV music for the Continental market. His dozen or so Neuronium albums have been released all over the world (they're currently available in the UK through Magnum Music, who are sponsoring his appearance at the show) and use a barrage of synthesizers, commercial and custom-built drum machines and sequencers.

Huygen's played twice before in the UK - once at the 1984 UK Electronica show in Sheffield, and once at the London Planetarium and Laserium in 1986. There are no festivals devoted entirely to synthesizer music in Spain', he confirms, but obviously you hear synthesizers all the time. Mainly it's in commercial music (Huygen recently produced an electro-pop band called Vooden) so I think there's a good reason to have shows like this'.

UK Electronica has remained stubbornly semi-professional, pulling in all the synthesizer/computer music fans of the UK (and some from France, Germany and Holland in past years) and largely featuring amateur or semi-professional musicians who compose at home and release their music on cassette. Doyen of the UK synth music scene is probably Ian Boddy, who gave up his job in a pathology lab a couple of years ago to work full-time in Newcastle's Rock City Music store. He's released four albums, funded out of his own money and contributions from Northern Arts and other interested parties.

Since getting into the equipment mainstream, Boddy has opted to compose on the Atari ST, and for his fourth album used the Steinberg Pro-24 package to create a remarkable set of pieces titled 'Jade'. Not a note of Jade was committed to tape before it was mastered - using a whole bank of synthesizer modules, samplers and drum machines. Boddy controlled the entire piece from his ST and mixed it down to a stereo digital tape.

Remarkably, Boddy and his partner David Berkeley are quite happy to take a pair of STs on stage, and have been known to perform Jade note for note. What they have lined up for UK Electronica '88 is anybody's guess...

The full line-up for the show, which lasts for most of a day, is as follows:

INDUSTRY, a new UK one-man band in the rhythmic synthesizer style, using a Commodore 64 running C-Lab SuperTrack for compositions.

DANIEL BIRY, a French avant-garde film music composer who uses an Atari ST with Passport Master Tracks Professional for more commercial electro-pop songs as well.

KEVIN O'NEILL, a Cardiff-based composer of floating ambient synthesizer music.

THE LAND OF YXX, a guitar-led synthesizer rock band performing compositions created on a Spectrum and Commodore 64, and featuring **STEVE PALMER** on MIDI-equipped guitar.

Computer/synthesizer composers Michel Huygen, Mark Jenkins, Ashok Prem and the Golden Light laser crew outside the spectacular venue for September 3rd's UK Electronica '88.



STEVE HILLMAN, a Leeds-based composer of atmospheric, rhythmic synth music.

ADRIAN WAGNER with **JEFF MINTER** presenting the computerised highlight of the day, *MERAK*, 'an experience in light and sound dimensions' combining Wagner's compositions on the Atari ST-based Hybrid Arts ADAP sampler with the mixed outputs of five STs running Minter's Trip-A-Tron psychedelic graphic software.

ASHOK PREMA, an Indian-born composer hailing from the Midlands who uses C-Lab Creator running on an ST to come up with Eastern-influenced, rhythmic compositions.

MARK JENKINS, who has been known to write a music article for ACE occasionally ()), who promises a barrage of powerful keyboard music.

IAN BODDY, whose career is outlined above, performing with musical partner **DAVID BERKELEY**.

MICHEL HUYGEN's *NEURONIUM*, who will be performing a set composed for the Madrid Planetarium and will feature ex-Tangerine Dream member **STEVE JOLLIFFE** as special guest.

Three video cameras will project images of the performers and specially created computer graphic videos onto a huge screen over the stage, two laser projectors from Golden Light controlled by an IBM PC will create animated graphics and abstract patterns as well as a huge 'laser sculpture', and TV screens around the hall will preview a new sound-to-light computer graphic system from desktop publishing pioneers Tetratone, called *Bit Rapper*.

As if that isn't enough, there'll be a Llamasoft stand selling copies of Trip-A-Tron, a wide variety of dealers with special offers on all sorts of computer and synthesizer music on LP, cassette and CD, and even a restaurant and bar. Tickets for the show are on sale now.

UK Electronics '88, Saturday September 3rd, St John's Smith Square, London SW1 3HA (round the corner from the Houses of Parliament). Doors open 1pm. Underground 5 minutes walk at St James Park or Westminster (District/Circle lines). Buses 3, 77a, 159, 10, 76, 507, 88. Tickets £5 Daytime (Industry to Adrian Wagner), £7 Evening (Ashok Prema to Michel Huygen), £10 Combined. Available from The Box Office at St John's (address as above), tel: 01-222 1061; cheques payable to St John's Smith Square; enclose an SAE. Credit card orders: add 10% handling.

MUSIC PANEL OF EXPERTS

This month's letters show the usual wide range of queries from musicians amateur, experienced, ambitious or confused.

For starters we have **CHRIS WAREHAM** of *Farnborough* who's using a Commodore 64 for musical applications. 'Does Steinberg's *Pro-16* sequencer package include a good step time sequencer, or is it only real-time?

In fact the latest version of *Pro-16* has very powerful step time facilities. You just hit the Step Time command button and notes are recorded with equal spacing rather than real time spacing. The 'quantisation' value used to tidy up real time performances is systematically used to set the step time value - 16th note quantisation will produce 16th notes in step time, and so on. There's now an enormously powerful Grid Edit page which can be used to examine the note you've entered, insert new notes or whole chords using joystick, and generally take control over the finest details of your music.

Chris is prepared to abandon the Commodore in favour of the Atari ST - but believes that most sequencers are aimed at the 1040.

In fact most ST-based sequencers will work on either version, but you may not have much note capacity on a 520 Steinberg *Pro-24*, which theoretically doesn't fit into a 520 at all, but you CAN run it, with a few hundred or a thousand note capacity. A much cheaper alternative is *Midtron Super Conductor*, which is only £40 or so but which will provide powerful editing of 16 polyphonic MIDI tracks with very great capacity on a 520. Steinberg is available through any music shop and *Super Conductor* from any music store.

GARY SEDGWICK of *Morden* has sent in some information on an area of PRESTEL devoted to electronic music. MIDISPOT is part of Hobbyspot run by EPUB, the Electronic Publishing division of the British Association of

Computer Clubs. There are other areas devoted to chess, astrology, science fiction, fantasy and many other subjects.

MIDISPOT has around 120 pages of information divided into an Introduction, Equipment Lists, Help and Advice (including letters), Reviews, and News. The introduction includes editorial on how to use equipment to its fullest and how the MIDI interface works. The equipments lists give details on MIDI instruments including synthesizers, drum machines and wind instruments. The help and advice section solves specific problems (sounds like it might put us out of work). Reviews are self-explanatory and the news section gives details of the latest MIDI products.

The recently-introduced letters section has been very popular and you can access the MIDISPOT section by typing 'MIDISPOT' starting at page 810921.

RICHARD TAYLOR of *West Yorks* has an interesting problem - he has a Commodore 64 and a Casio HT700 MIDI keyboard and says he doesn't know of any good MIDI programs on cassette.

He's one up on us, because we don't know of ANY programs on cassette, full stop. The problem here is that even fairly short pieces of music create enormously long MIDI data files, and saving them to cassette is just too much like hard work. If anyone has ever seen a MIDI package on cassette, or has written one themselves, please let us know. Richard will almost certainly have to do for a disk drive. He concludes 'How much is Steinberg *Pro-16*, what is it, what does it do and where can you get it?'

Well, the answers to these questions also apply to the C-Lab *Supertrack* package. Each costs around £100, comes on disk (there used

to be a cartridge version of *Pro-16* as well, but you'll probably find it combined with a score writer now and so more expensive), each is a 16-track, polyphonic MIDI sequencer which will record your keyboard performances, play them back at different speeds, allow you to edit them and combine them with subsequent performances for multi-track performances (providing you've got more than one instrument, or one instrument which can make several sound simultaneously like the Yamaha FB-01 or Roland MT-32 synth modules), and each is available from music shops - Steinberg through the distributor *Envide*, *Soundworks* and C-Lab from *Sound Technology*, any music shop which can't get in touch with these distributors must be a butcher.

MARK JONES of *Eastbourne* has also bought a Casio HT700 but is not too keen on its miniature keys. 'Is it possible to link the HT700 to a basic 'no frills' full-sized keyboard via MIDI - and if so how much would I have to pay?'

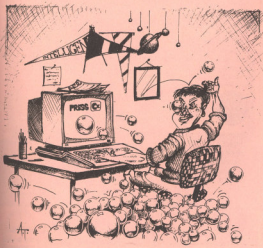
In fact there's very little choice in master keyboards at the budget end of things. You can pay LOADS of money for units from Oberheim, Roland or Yamaha, or portable remote keyboards from Casio, Lynx or Korg - or you can buy something from Cheetham.

Cheetham's MK511 costs £199 and has five octaves of full-sized keys, pitch bend, memory buttons and footswitch socket; the MK5V adds velocity sensitivity and a modulation wheel for £275, and the MK7VA has seven octaves of weighted keys, aftertouch, three split points, four MIDI outs and eight performance memories for £400. Linked by a single MIDI lead, they're available through any music shop and some computer shops (even Boots!).

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Thanks to Andrew Thomson of Melbourne for this masterpiece.



OH NO, NOT ANOTHER AMIGA GRAPHICS DEMO...!

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ACE!

GAMES YOU'VE GOT TO HAVE

All of the following games are **ACE RATED**, that means they're all red hot masterpieces of computer entertainment. Some of the games were available long before the first issue of ACE came off the presses however, so we never had the chance to review them in the magazine. These games are marked with the **ACE CLASSIC** flash, and rest assured, they're all superb pieces of software and are well deserving of the title.

PUZZLES

If you're after a game that will provide you with a real challenge, without necessarily requiring large doses of strategic thinking, then it's a puzzle game you want.



BONECRUNCHER

Superior Software ● C64 £9.95 ● £11.95 ● Amiga £14.95

At first sight this recent release may appear to be nothing more than a Boulderdash rip-off. However there are a number of **highly innovative** gameplay features which give Bonecruncher a feel all of its own. Highly recommended for those who prefer to solve problems rather than shoot them.



BOULDERDASH

Prim Leisure Corporation ● Spectrum £2.99 ● C64 £2.99 ● Amstrad £2.99

A game that has everything - **instant addition**, long-term challenge, frenetic excitement as the clock ticks down, and **extremely tricky** puzzles. You must collect jewels hidden in caverns, digging away earth and boulders to get at them. Boulders can drop and cause you serious damage, while the jewels are often hidden by seemingly impenetrable walls. **Complex, but great fun.** Boulderdash is a classic you can't afford to miss in its budget incarnation.



DEFEKTOR

Gremlin/Vortex ● Spectrum £7.99 ● C64 £9.99 ● £14.99 ● Atari ST £19.99

Optics are the order of the day here (not the spirit dispensers) as the player tries to connect a laser beam to a receiver and at the same time destroy a number of cells that are on-screen as well. You'll need to make full use of the mirrors, fibre-optic conduits and polarising and refracting blocks if you're to achieve your aim. Clear the first screen and you'll only have 50 more to do. **Fascinating stuff** that's horribly addictive.



NEBULUS

Hewson ● C64 £8.95 ● £12.95 ● Spectrum £7.95

Guide pogo to the top of eight towers using the spiral of platforms, lifts and ledges that form the route. It's a **highly original** game that strikes a fine balance between frustration and addition, adding to which is the rotary scroll, thus making it a good looking, **playable winner** of a game.

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Gauntlet

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RECOMMENDED GAMES



SENTINEL

Firebird • Spectrum £9.95cs • C64 £9.95cs £14.95cd
• Amstrad £9.95cs £14.95cd • Atari ST £19.95cd • Amiga £19.95cd

Bizarre and compelling strategy game played on the chequered surface of a planet dominated by the Sentinel. Fundamentally you have to absorb energy while trying to stop the Sentinel from absorbing yours. A clear brain and fast trigger finger are both necessary in this very original and large - 10,000 possible landscapes - game.



SKULLDIGGERY

Currently undistributed

Boulderdash clone that completely outdoes the original on this particular machine. Again (see Boulderdash, above) you're digging for diamonds in caverns over 100 different screens - with a time limit for each screen. Skulldigger scores on playability (easier screens to begin with and a choice of starting point) and its entertaining two-player option.



SPORE

Bulldog • C64 £1.99cs • Amstrad £1.99cs • Spectrum £1.99cs

The winning combination of strategy, frenzied blasting and great graphics make Spore a worthy full-price release - what a bargain then to be able to pick it up for £1.99!



TETRIS

Microsoft • Spectrum £8.99cs £19.99cd • C64 £8.99cs £12.99cd
• Amstrad £8.99cs £12.99cd • Atari ST £19.99cd • Amiga £19.99cd
• IBM PC £19.99cd

A fascinating geometrical oddity, this Russian puzzler turns the obscure mathematical topic of packing into a cult game. One at a time, shapes fall downwards into a rectangular playing area. Left to their own devices they'll pile up until they reach the top of the screen; your task is to guide them down and pack them in tightly so that doesn't happen. Different versions have proved to be rather variable in their arcade aspects, but the brilliantly simple idea behind them means they're well worth a look whatever your machine.



THINK!

Firebird • Spectrum £1.99cs • C64 £1.99cs • Amstrad £1.99cs

Originally released by Argonauts at full price, but now available for a fraction of that from Firebird. It's a horribly addictive game played on a 6x6 grid - either one or two player - in which you attempt to connect four counters, horizontally, vertically or diagonally. A compelling puzzle which incorporates many additional features and skill levels.



XOR

Logotron • Spectrum £7.95cs • Amstrad £9.95cs £14.95cd
• BBC £9.95cs £12.95cd

Extremely tricky maze game involving the player controlling two shields, and collecting marks through 15 mazes, which increase in complexity as you progress. Also in later stages, fish and chickens lie in wait, often blocking the mazes and just waiting to fall on you and bring your quest to a premature end. Later still, the fish and chickens are the least of your worries as bombs, transporters and dolls crop up to ensnare against you. Smooth scrolling, simple graphics, this one requires planning to complete successfully.

BRAIN GAMES

Fed up with mindless blasting? Want a game that offers you an opponent who's worthy of your skills? This is your section.



CHESS MASTER 2000

Electronic Arts • C64 £9.95cs £14.95cd • Amiga £24.95cd
• Atari ST £24.95cd • IBM PC £24.95cd

Strongest chess game on the Amiga, with excellent graphics, 20 or 30 viewpoint, 12 levels of difficulty and all the playing options you could wish for. Plus some fairly nifty speech synthesis.

RECOMMENDED GAMES



COLOSSUS CHESS 4

CDS • Spectrum £9.95cs • C64 £9.95cs £14.95cd
• Amstrad £9.95cs £13.95cd

Best bet for 8-bit machine owners, with choice of 2D or 3D view, umpteen levels of difficulty, and myriad options which enable you to play, watch, work out chess problems, etc against a fine computer opponent.



COLOSSUS MAH JONG

CDS • C64 £9.95cs £14.95cd • Amstrad £9.95cs £14.95cd

Rummy-like oriental game of strategy and chance. A tutor program and short manual make this an easy to use and highly entertaining piece of software for veterans and novices alike.



INFOGRADES' BRIDGE

Infogrames • Amstrad £12.95cs £15.95cd • MSX £12.95cs

Graphically the best of all contract bridge simulations, with large playing cards depicted against a suitably green baize background. Plays a good game (for a computer, which after all is a bit short in the imagination and fair department), and features a wide range of options and bidding conventions which you can toggle on and off according to your style.



POWERPLAY

Arcana • Amstrad £8.95cs £14.95cd • C64 £8.95cs £14.95cd
• Amiga £19.95cd • Atari ST £19.95cd

If you want to try out your general knowledge, we reckon you'd be better off with this original and challenging combination of strategy game and quiz than with the admittedly monster-selling Trivial Pursuit. Powerplay is graphically very pretty in its setting on Mount Olympus, home of the Gods.



SCRABBLE

Leisure Genius • Spectrum £9.95cs • C64 £12.95cs £14.95cd
• Amstrad £9.95cs £14.95cd • IBM PC £24.95cd

The hugely popular word game translated very successfully onto the micro. Fast, excellent display, and a surprisingly large vocabulary (even if it does include some strange looking words on occasions). Good enough to give even strong human opponents a tough game at the higher levels.

SPECIALS

Original works that are simply unclassifiable feature in this section.



ATF

Digital Integration • C64 £8.95cs £12.95cd • Spectrum £8.95cs £12.95cd
• Amstrad £8.95cs £13.95cd

Excellent combat/flight simulator that's a bit of a change for Digital Integration, the simulation specialists. The emphasis is on solid action, the result being a sure-fire hit.



DARK SIDE

Incentive • C64 £9.95cs £14.95cd • Spectrum £9.95cs £14.95cd
• Amstrad £9.95cs £14.95cd

The second game using the Freespace programming system, which sets more of an arcade challenge. The 3-D graphics are again superb as are the tasks and puzzles.



DRILLER

Incentive • C64 £14.95cs £17.95cd • Spectrum £14.95cs £17.95cd
• Amstrad £14.95cs £17.95cd • IBM PC £19.95cd

This three-dimensional masterpiece of exploration and adventure took a year to develop, but the wait was worth it. A whole world was crammed into 8-bit micros to give the player such a feeling of 'being there' it's uncanny. It's bold, dazzlingly original and very playable. A milestone in computer entertainment.



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RECOMMENDED GAMES

ACE CLASSIC

ELITE
Firebird • Spectrum £14.95cs • C64 £14.95cs £17.95cs
• Amstrad £12.95cs £14.95cs
• BBC £12.95cs £14.95cs (available from Superior Software)

Still the best space trading game, *Elite* set a standard for other companies to follow. One of the first space games to use vector graphics, it's a shooting and trading effort set across several galaxies, with plenty of variety to the gameplay. You can trade legal goods in (relatively) safe systems, or run the gauntlet of pirates in the galaxies' danger spots with your hold full of contraband. Either way there's a nice line in zero-G dogfighting, and as big a task as you'll find anywhere.

ACE RATED 100

MAGNETRON
Firebird • Spectrum £7.95cs • C64 £8.95cs £12.95cs

Puzzles and action Steve Turner style. Save the world by dismantling eight satellites. Steal parts from the enemy droids to upgrade your own droid, and hopefully make your job a little easier. The ideal game for all *Quazatron* fans looking for a similar, new challenge.

ACE RATED 100

MATCH DAY 2
Ocean • Spectrum £7.95cs £14.95cs • C64 £8.95cs £12.95cs
• Amstrad £8.95cs £14.95cs

Definitely the football game on micros; magnificent animation, great gameplay, vicious and skilful computer opponents. Various improvements over the original make this a must for all computer football fans.

ACE RATED 100

QUEDEX
Thalarnus • C64 £9.95cs £19.95cs

In this impressively challenging game you must steer a metallic ball through ten different screens of mazes, bonuses and obstacles, all within a set time limit. This simple game concept has a host of added features to make it particularly pleasing; you can carry over unused time to the next screen, for example, and tackle the different screens or 'planes' in any order you wish. Excellent graphics and utterly absorbing play.

ACE CLASSIC

SPINDIZZY
Electric Dreams • Spectrum £9.95cs • C64 £9.95cs £14.95cs
• Amstrad £9.95cs £14.95cs

Tremendous stuff; steer your spinning top over tough obstacles and collect jewels, against a lengthy time limit. The game landscape is a vast system of catwalks, ramps, towers, and trampolines surrounded by lethal drops – and NO safety rails. Floor switches activate lifts and bridge gaps, but tripping them in the right order can be harder than it looks. A few bad guys and a lot of nice touches, but the exploration's the thing.

ACE CLASSIC

TAU CETI/ ACADEMY
CRL • Spectrum £9.95cs • C64 £9.95cs £14.95cs
• Amstrad £9.95cs £14.95cs • Atari ST £19.95cs • Amiga £19.95cs

Fight simulation/shoot-em-up and its sequel which are both incredibly smooth and well put together. The attention to detail is impeccable as you set off on hair-raising missions as a space cadet. In Academy you get to design your own space skimmer craft as well.

ACE CLASSIC

WIZBALL
Ocean • Spectrum £7.95cs • Amstrad £8.95cs £12.95cs
• C64 £8.95cs £14.95cs

A compelling and original ball game in which you become the wizball and must set out to conquer the 'colour creatures' which are intent on eliminating the spectrum and rendering the landscape grey and drab. Controlling the wizball is great fun and makes this one of the most playable games to have appeared for a long time.

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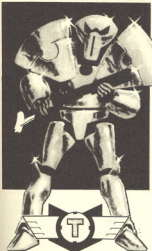
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HARDWARE UPGRADE GUIDE

	ACORN ARCHIMEDES	APPLE MACINTOSH
THE RANGE	The 305 and 310 are home machines, while the 410 and 440 are only really of interest to serious users.	The Mac SE comes in a distinctive upright monitor/system box with built-in drives, while the Mac II's system/drive box and dedicated monitor are separate. Both have separate keyboard and mouse.
MEMORY & CHIPS	The 305 has 512K of memory while the 310 has 1Mb, but both use Acorn's own super-fast 32-bit ARM chip as their central processor.	Though both machines have 1Mb of memory, the SE only has a Motorola 68030 to push it around while the II uses the much faster (but closely related) 68020.
PRICES	Recommended retail prices start at £301.40 for the 305 on its own. There's no sign of a second-hand market as yet.	Recommended retail prices start at £2,284 for the SE and £4,329 for the Mac II. Macs tend to keep their value well, so second-hand ones aren't terribly cheap. Cut-price brand new ones are rare too, so the cheapest thing can be to personally import one from the States (i.e. fly to New York, buy a Mac and bring it back with you).
GRAPHICS	Screen resolution is variable: typical modes would be 320x256 in 256 colours 640x256 in 16 colours or – with an expensive multi-sync monitor – an impressive 640x512, again in 16 colours. There's one hardware sprite – the cursor – but with that speedy ARM chip for power, the Archie's blindingly fast in software.	The mono-only SE has a screen resolution of 512x342, while the Mac II runs to a 1027x760 screen in 16 colours, chosen from a palette of more than 16 million!
MONITORS	Biw – composite video; colour P RGB + sync; no TV modulator.	As well as the built-in (SE) or dedicated (Mac II) Apple units, there are plenty of third-party monitors offering million-pixel screens and similar. Like most things Mac-ish, these get very pricey.
SOUND	The Archie has a MIDI interface as standard, its built in sound features 16 channels (in 8 stereo pairs) and a range of six octaves, all fed through a good-quality internal speaker.	The Mac's four-channel sound chip can produce some very acceptable noises – stereo on the Mac II – but you'll need a third-party MIDI port add-on if you're serious about music.
DRIVES, MICE & JOYSTICKS	The built-in drive is quiet and fast, and packs a healthy 800K onto a 3.5in disk. The Archie comes with a nice 3-button mouse – but has no joystick port!	The fast, reliable built-in drives pack 800K onto a 3.5in disk. The keyboard's very high-quality stuff, as is the one-button mouse.
SOFTWARE	Games for the Archie are rare things indeed. Superior and Grand Slam are both committed to supporting the machine, but for now the only major titles are Zorch and (for 310 owners) Conqueror, both ACE-rated games. There's still no sign of a game that really pushes the Archie to anything like its limits. The handful of graphics packages available should keep art-loving Archie owners happy for now. Other applications areas are ticking over nicely if not exactly booming.	Games software is not terribly plentiful on the Mac, though adventures are well catered for. There's a huge amount of graphics and disk-top publishing software – most of it firmly mono – and a fine range of titles for the business user. There's also plenty of great software for the MIDI musician, but it doesn't come cheap.
PROSPECTS	The Archie's educational leanings make for a poor games outlook – there's no sign of support from any of the big-league houses – and the lack of a joystick port doesn't help. The graphics software base would mushroom if Acorn cut their prices, but until then things don't look too hot here either.	The future for the Mac is excellent, but mostly on the serious side of things.
OVERALL	The Archimedes is years ahead of its time, and vastly more powerful than the competition. A stiff bit of price-cutting would make it an unbeatable leisure machine, but Acorn just don't seem to be interested. At the current price it's a worthwhile buy for computer scientists and people with money to burn, but that's about it.	The Mac's a very upmarket machine, and is priced accordingly. Almost essential for OTP users, it's a luxury item or 'Yuppie toy' for the rest of us.
RATINGS	Graphics 5 Sound 4 SOFTWARE: Range 1 Quality 2 Prospects 2 	Graphics (SE) 3 Sound 4 SOFTWARE: Range 4 Quality 5 Prospects 4 

ATARI ST	COMMODORE AMIGA	IBM PC AND COMPATIBLES
The 520STFM and 1040STF both come as combined keyboard/system/drive consoles.	The A500 is a single unit with built-in disk drive, while the A2000 has a separate keyboard and system box.	IBM's PC is the original, but the best buys these days are 'clones' like Amstrad's PC1512 and 1640. Specifications apply to most modern PCs, but check the details for yourself before buying.
The 520STFM has 512K of memory, while the 1040STF has 1Mb. Both use the Motorola 68000 processor.	The A500 has 512K of memory and the A2000 a hefty 1Mb, both of them using a Motorola 68000 for processing power.	PC compatibles normally have 512K or 640K of memory, with an Intel 8086 or related processor. (The 8086 is slower, while the 80286 and 80386 are faster but more expensive.)
Recommended retail prices were 520STFM P £369.99, 1040STF P £399.99, but at time of writing news came through of a price cut, restoring the 520ST's old £299.99 price tag. Whether this will include the 'Summer Pack' games bundle isn't yet clear. There's a strong second-hand market in 520ST's, and reductions on brand new ones aren't hard to find either. The new price cuts could well throw this into turmoil, mind you.	Recommended retail prices are: A500 £299, A2000 £1296. Shop around for lower prices or package deals. There's a fair old second-hand trade in unwanted 520's, though the recent drop in RRP means that prices here may not be too good. Also still available is the creaky old A1000, the first Amiga model and, with its lengthy boot-up sequence and puny (256K) memory, deservedly discounted.	Prices start at around £400 for a mono PC, but a 640K machine with an EGA display and top-flight monitor will cost more like £1000. There's a thriving second-hand market, and even buying brand new you're well advised to shop around.
TV or colour monitor users can get at two screen modes on the ST, medium res (640x200 in 4 colours) and low res (320x200 in 16 colours), both working from a 512-colour palette. Users with mono monitors can only access one mode, high res, which gives them a 640x400 screen in black and white.	Hardware sprites and scrolling make conventional games easy to write, while the built-in blitter greatly speeds up large-scale graphics operations. Typical screen modes are 320x200 in 16 colours for games, 320x256 in 32 or 4096 colours for art, or 640x256 in 16 colours for serious use. In all cases, colours are taken from a palette of 4096.	The three main graphics standards are CGA, EGA and Hercules. None of these offer sprites or scrolling in hardware. The main CGA (Colour Graphics Adaptor) modes are 320x200 in 4 colours and 640x200 in mono. CGA has no palette as such: the 4-colour mode comes in two colour-scheme choices, but that's all. An EGA (Enhanced Graphics Adaptor) PC can produce these two CGA modes plus a few of its own, offering displays of up to 640x350 in 16 colours from a palette of 64. Hercules graphics are mono only, but with a maximum resolution of 720x400 they can be very useful for applications like DTP. (Desk-Top Publishing).
RGB, Mono, or built-in TV modulator (520ST only - 1040ST needs separate modulator).	SCART output for e.g. Commodore's A1081 monitor (£349.99, but look out for bundling deals). TV modulators are available, but aren't included in the price.	Normally standard RGB, with no TV output.
The internal sound chip's poor, with only three channels and no stereo, but the built-in MIDI ports make the ST a must for penny-wise musicians.	Built-in sound is excellent, with 8 channels in 4 stereo pairs offering you a nine octave range or some reasonable human-ish speech. You'll need a third party add-on to get MIDI compatibility, mind you.	A weak sound standard is very much the PC's Achilles' heel as a games machine, and speaker quality is usually low accordingly. MIDI interfaces are available, but the ST and Mac still beat the PC as machines for the musically minded.
The internal drive stores 360K (most 520s sold at the moment) or 720K (brand new 520s and all 1040s) on a 3.5in disk. A two-button mouse plugs into one of the inconveniently situated controller ports, leaving the other one free for a joystick.	The Amiga's built-in drive is often noisy and always slow, but it does pack 880K onto a 3.5in disk so it's not a total disaster. The two-button mouse takes up one of the machine's two controller ports.	Though 5.25in 360K disks are still the standard, the newer 3.5in 720K drives are becoming more common. There are two different joystick standards, IBM (which is analogue, and the norm for older or American games) and Amstrad (which takes a standard Atari-style stick).
With the best games support of any machine listed here, the ST's probably still leading the upgrade race. Graphics software's some way behind the Amiga but catching up fast, with new titles stretching the ST's limited hardware quite remarkably. The ST's built-in MIDI port has earned it outstanding support on the music front, with some excellent packages from a wide range of companies. Serious software's looking up too.	On the games front the Amiga's now coming out of the ST's shadow, at least to the extent that most ST games also appear in Amiga form. Unfortunately they are still usually straight conversions, taking no account of the Amiga's extra hardware. There's a wide range of art, video and animation packages for the machine, many of them excellent. Music's less well catered for, but the built-in hardware's got great potential.	There's a vast software base for PCs, but relatively few games that are good by modern standards. This situation's rapidly improving though, as is the art side of things (especially on the EGA front). Music software is available (if rather expensive), but it's only on the serious side of things that the PC really wins out.
Great, especially given the price-cut news. The ST's rapidly catching the 8-bit market leaders on numbers of titles, and easily outstripping them on quality.	Looking very bright now, thanks to Commodore's recent price cut.	Prospects for a PC games boom are good, especially if Amstrad's rumoured ultra-cheap PC leisure clone shows up.
An excellent all-rounder, the ST delivers no-hills power at an affordable price. It's number one for MIDI fans, terrific for games and - with mono monitor - a great machine for serious use as well.	Though its hardware makes it a great games machine, the Amiga still lacks the software to really show it off properly. It's a must-buy for the computer artist, however.	The PC's a fine all-round machine, and the workhorse of modern computing - but if you're just interested in games or music, you'd best look elsewhere.
Graphics 4 Sound 3 SOFTWARE: Range 4 Quality 4 Prospects 5 	Graphics 5 Sound 5 SOFTWARE: Range 3 Quality 4 Prospects 5 	Graphics 4 Sound 1 SOFTWARE: Range 5 Quality 6 Prospects 4 

So what makes this little time-waster so addictive? The sound is minimal, gameplay non-existent, and graphics laughable. It must be just the sheer pleasure of crunching dalek after dalek in a glorious rampaging blood-thirsty...plod. Who knows? Here are assorted quotes gathered from the ACE team by your fearless reporter...

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ACE PRIZE CROSSWORD 6

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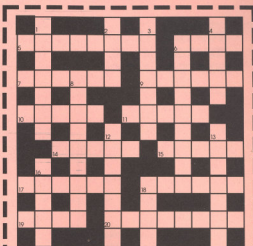
The ACE crossword is cryptic. The answer might be an anagram, or formed from the end of one word and the beginning of another, or simply another word hinted at by the clue. Most – but not quite all – of the answers are computer-related.

ACROSS

5. Your favourite PC magazine's written about company youth's software house (8)
6. Program instruction written in BASIC – o dear (4)
7. So when to form a software house? (6)
9. Game sailor (5)
10. Remind Ian about the state (5)
11. Alternative piece of computer data on planet's path (5)
14. Computer snake (5)
15. Hold up programming deal with youth leader (5)
17. Angry, Zorba keeps game from Ocean (6)
18. It's fashionable to try out the final part (6)
19. Nasty about Japanese company (4)
20. Software house to come down on high flier (8)

DOWN

1. Provides protection on monitors (7)
2. I see man about Ocean (4)
3. Spare time genius has for software house (7)
4. I make a bargain that's perfect (5)
6. Leggy creature's game (9)
8. Take turns on giddy game (9)
12. If rarer could be developed as a Formula One game (7)
13. Game judo expert has to have courage for (3, 4)
16. Find car gone when filled with gas (5)
18. Threesome running riot! (4)



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1. The coffee from the machine being too weak.
2. People interrupting games of Virus.
3. Andy Smith whistling.
4. Not having a connecting door to the pub nextdoor.
5. The Art Dept. stealing our biscuits.
6. Andy Smith smoking.
7. Game names that won't fit on the page.
8. Losing at Daleks.
9. Other people being right.
10. Not being able to print the things that REALLY annoy us.

SOLUTION TO PUZZLE No4

Answer: D E A D divided by thirteen equals 1 1 2 1 - and this month's winner is **Andrew Scott** from **Peterborough**, who wins £25 worth of software for his Spectrum 48K.

Solution: The examples given in the question are simply divisions in Hexadecimal form, in which the 'word' is made from the hexadecimal digits A to F, and the result of the division (which works out exactly) is also given in hexadecimal - though in this case only comprising the digits 0 to 9.

For example, 'A C E' in hex is equivalent to the decimal 2766. This, divided by 2, gives 1383 (decimal), which converted back to hex is 567.

Consequently, we need to find an acceptable English four-letter word, made up of the letters A, B, C, D, E or F, which is an exact multiple of thirteen. Note that the use of the word 'thirteen' denotes that this value is the **decimal** thirteen. To have used the digits '13' could have also meant the hexadecimal 13 (decimal 19), so to avoid ambiguity the word 'thirteen' was used.

The program used generates all 1296 hexadecimal values comprising four digits, each digit being in the range A to F. The equivalent decimal values for these hexadecimal letters is 10 to 15 respectively, so these are the values held in the four FOR/NEXT loops. The decimal equivalent is computed by multiplying each of these values by its correct power of 16, and adding these totals together (line 150).

This value is then tested to determine if it is exactly divisible by thirteen. Because some micros can produce small errors with non-terminating decimals such as those obtained by dividing certain values by thirteen, the program uses a 'reverse' check by direct multiplication to determine exact multiples of thirteen (lines 160 and 170).

All values which pass this test are printed out, and from these the only common English word can be extracted from it. The complete sum is then easily constructed (remembering to convert the dividend back to hex form!).

```
100 D$="123456789ABCDEF"
110 FOR P=10 TO 15
120 FOR Q=10 TO 15
130 FOR R=10 TO 15
140 FOR S=10 TO 15
150 N=P*4096+Q*256+R*16+S
160 D=INT(N/13+0.5)
170 IF D*13=N THEN PRINT MID$(D$,P,1);MID$(D$,Q,1);MID$(D$,R,1);MID$(D$,S,1);"
180 NEXT NEXT NEXT NEXT
```

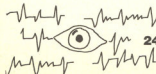
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INDUSTRY FAVOURITES

What are the people that run this industry really like? What's their favourite T.V. prog? What do they like to drink (when someone else is buying?). Just the sort of questions we all want the answers to, eh?

Bruce Everiss (currently at Codemasters) likes to watch *Black Adder*, *Monty Python* and those early *Morecambe and Wise* Christmas Specials (not all at once). His all-time favourite film is *To Have and Have Not*, because it has that superb line 'If you need me... just whistle'. Bruce likes the odd drop of REAL Irishness while he's listening to his favourite composer - Chris Rea.

Geoff Brown (U.S. Gold's Managing Director) on the other hand likes to watch *Dallas* because 'it reminds me of the software industry'. He also likes *Brookside* 'for the same reasons' and the 7 o'clock news on channel 4. Geoff likes to sup *Bloody Mary's* when he's listening to *Joni Mitchell*, and his all-time favourite film is *Camelot*.

Peter Blotta (Mirrorsoft's Managing Director) disagrees and says he really goes for *Hill Street Blues*, *Star Trek* and *St. Elsewhere* - but hates soaps. Southern Comfort and Lemonade is what Peter drinks while he's listening to his favourite Lennon and McCartney compositions, and 2001 is still his No 1 film.

Dominic Wheatley (the Do hall of Domark) likes to relax and have a good chuckle watching *Spitting Image*, *Yes*, *Prime Minister* and *Friday Night Live*. His favourite composer's Jim Morrison (late of *The Doors*) and he loves a drop of the bubbly (Moët and Chandon, of course!) Dominic's favourite film is that Spielberg classic *Duel*.

NIGEL FROM RIGEL



Our thanks to Dave Bowden of London for sending us the hilarious 'Nigel from Rigel'...

TOP TEN REVIEWERS BUZZ PHRASES

For those of you who occasionally have a little trouble reading between the lines in games reviews, the ACE team have compiled a list of reviewers buzz phrases. Naturally, we wouldn't use any of these ourselves.

1. I won't spoil the game by telling you about (I couldn't get off the first level).
2. Fans of the genre will love it (Both of them).
3. Good for people who like this sort of thing (I know I didn't).
4. Very atmospheric (I hadn't a clue what to do but it looked and sounded nice).
5. Try before you buy (Rubbish).
6. Good value for money (Cheap rubbish).
7. Tricky controls (I kept dying).
8. Poor collision detection (I kept dying).
9. Bad restart positions (I kept dying).
10. Far too easy to complete (Nobody else kept dying).

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FACE READERS' PAGES

ticks, music, complete Zap 64, many extras, excellent condition. Cost £1300, sell for £300. Tel: 0444 413425.

Amstrad 464 with colour monitor, loads of games including *Gryzor* and *Matchday 2*, magazines, 2 joystick, original boxes. Whole lot £290. Tel: 01-958 2469 after 5pm.

Amstrad CPC464 colour monitor, free extra cassette recorder, joystick (Pro Plus), loads of top games including *Star Trek* (GAC), *Aladdin* worth £300, sell only £200. Tel: (0342) 810407.

Commodore 64, datasets, 1541 disk drive and over £500 of original tape and disk software, a bargain at £210 only. Price taken! Will call. Phone Ian on 01-542 8348 after 6.30pm.

Spectrum, tape recorder, Interface 1, inductive and cartridges, magazines, dual-port joystick interface with joystick, over £150 of games with cassette case. Phone Steven on £450, asking only £125 only. Phone Steven, Northumberland 0434 84751.

Atari 520STFM complete system, including printer, 7 pieces of top quality software, all under 6 months old. Total value approx £350, will sell for £260. Phone 0454 312135 evenings.

C64 1541 disk drive, tape deck, sound AD, speakers, disk box + disks, games, magazines, Atari Rapid 128, 128K, 128K, over £420, sell for £220. Phone (0244) 821484 evenings, contact Justin.

520STFM, two months old and guaranteed, loads of software like *Dungeons and Dragons*, *Star Trek*, *Commodore* 16 original titles, all under £600. Will sell for £400. Tel: 021 378 0472.

CBM64, datasets, 1541 disk drive, joystick, 18 blank disks, tape and disk software worth over £800, books and mags worth over £100. Total value over £1250. Bargain £400. Ring Esther 62825.

CBM64 amazing offer includes £550 of original games - at latest and greatest titles - *Alien Syndrome*, *Platform*, etc. datasets, mags, joystick, perfect. Will sell for £240, sell for £250 only. Tel: (0904) 253620.

Spectrum 2, joystick, software, magazines, books and a three year guarantee, all under over £500. Sell only for £250 only. Phone Mark (01) 508 2863 or Simon (01) 502 0637.

ST software, Prawn 613, *Quake* Thieves 13, *Bridge Player* £12, *Guarantee* £12, *Penny Mail* £3. Other titles £1200 worth of software. Ian, Berkhamshead, Harps, HP4 1DR.

Amstrad CPC464, mono, modulator, dual cover, 20 mags, joystick, over 40 games including *ATF*, *Elex*, *Wizball*, *Ten Pin*, *Sworder* Lord etc. £175 only. Phone Lutz 0562 863579 after 7.30pm.

C1280, integral 1571 drive, two joystick, expert - Action *Replay* Pro, tons of disk + tape (see the list) 30 odd computer mags, £480. Phone Edwin Edwin on 011 (0273) 734660.

Spectrum 4k games for sale, all half price. Phone Falkenberg, Norfolk 2095 ask for Guy after 6pm or write to The Star, C/o Falkenberg, Norfolk.

Spectrum 3, a few games + home mad prog, utilities etc. 115 Beacon Hill Road, Newport, North Notts 23JN. Tel: 0636 71108 after 6pm for £150.

128+2 Spectrum, Sound sampler, multi-tape Midi Int, Spectrum, printer, lightweight £500 worth software, all for £250. Phone Jason after 7pm (01703) 582112, also copy header guard + ampbooks £150.

CBM 64, disk drive, tape deck, reel switch, £300 disk software + 50 disks, 100+ magazines, £250 only. Phone Marc 0993 77507, Oxford area.

Sega console with light spear, games, Afterburner, Global Defender, Zillion, worth over £300, sell for £150, will not go below £150. Tel: 01 388 8845, ask for Sacha after 5pm.

Atari STFM with over £300 software in word processor and art packages as well as games. An extra cost over £700, sell for £400. Tel: Balooz (0462) 863639 after 6pm.

Amstrad CPC 464 with colour monitor £500 worth of software, loads of mags, whole deal worth £735, sell for £300. Tel: 061 477 0224 or swap for Atari ST/1M.

Amiga games pack, Barbarian (Pygmyone).

Terminator, Black Lamp, *Leadboard*, *Super Hero* £100 the lot. Contact C K Chik, 10 Ann Street, Shiremoor, Newcastle Upon Tyne, NE27 0CR.

C64 tape game for sale, 5 for £5. For list send SAE to Mike, 61 Riverside Court, Hallow Road, Worscoter, WY2 6DB.

C64, C2N, 1541, 1529, word processor, software worth over £600, monitor, Simon's Basic, *Mouse Assembly*, all manuals, all good condition, worth over £1500 (bought £1315) only. Harms, Tel: (0252) 20221.

Spectrum 128+2, all new, many mags and poke cards, £150 games selection only £110 the lot. Ring 01-888 5456 after 7.30pm.

Atari ST (double domain), game, art, utilities, music, med, demos, all at only £5 per disk plus free, SAE list, 15 Woodroose Park, Birmingham, B30 1UE.

Spectrum Plus 3, joystick, dataset, in leads £200 worth of latest software, tape and disc - *Renegade*, *Combat School*, *Driller* all original, under guarantee £380. Tel: (0942) 696135 Manchester.

Amstrad 464, green screen, modulator, joystick splitter, 100+ games inc *Driller*, *GAC*, *Guarantee* £12, *Gryzor*, also dual cover, mags etc. Bargain £200, only price offer £260. Phone 0454 312135 after 7.30pm.

Amstrad 464, 100+ games inc *Driller*, *GAC*, *Guarantee* £12, *Gryzor*, also dual cover, mags etc. Bargain £200, only price offer £260. Phone 0454 312135 after 7.30pm.

Sega console with £200 games, still under guarantee, as new, sell for £150 or swap for Nintendo with games. Tel: (0977) 42659 after 6pm.

Amstrad CPC128 plus colour monitor, games, joystick, tape recorder, books, magazines, DMF7000 printer worth over 1000 pounds, sell for £600 only, touch sale for upgrade. Tel: (0244) 377851 evenings.

Amstrad 6128 colour monitor, disk, tape also joystick, light pen, screens TV adaptor, £300+ software, (split and disk) *ATF*, *Elex*, etc. worth £800+ sell £445 only. Javed, Javed (0756) 60414 581 guaranteed.

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Amstrad CPC464, colour monitor, speech chip, graph, loads of games sell for £135 only. Phone Bob (0277) 365548, Tel: Home Day.

Spectrum 3, Multiface 128, joystick, £50 of mags and over £300 of software worth £900, sell for £260 only. Phone (02240) 695399.

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Atari 520STFM 4 months old £400 software including STAC, *Commer* *Commer*, *Dungeon* Master, *Beyond* *King*, *Bards*, *Tale*, *UJAS*, *Captain* *Blond*, *Obs*, *Back* etc. All at £370 only. Phone Peter 02594 2259.

Amstrad CPC464 still boxed, £250 of software including *GAC*, *Image* *System* and many top games, joystick, over 100 magazines, books. Worth well over £500. Offer £270 only. Telephone (0742) 884396.

CBM64, C2N, disk drive, Action Replay IV, £1000 games including *Platform*, *Wizball*, *Subbie* bubble, *Disk* box, 20 blank disks, *Neco* music and cheese. Will sell for £450. Phone Glenrothes 74187.

Atari 520STFM with joystick, music, mags over £500 of original software, copier, disks, books, joystick, worth over £300. Quick sale for offers £300+. Phone Brendan on (01) 886 0141.

Amstrad CPC464 with colour monitor, over £500 of software including *Combat School* etc. Quickshot 2 joystick, all mint condition (Tape drive). Sell for £350. Phone 0382 151643.

Spectrum software 1984-96 for sale. Prices from £1. Send SAE for list to Scott Ward, 20 New View, Lifford, Kettering, Northants. NN14 3LD. Thanks.

BBCB, disk drive, 1770DE system, quality software, 100+ games, £450 software (disk and tape), worth £1000, sell for £450. Tel: Dursley 860261 between 5pm and 5pm.

Mag and disk software, 30 disks of software including *Commer*, *Command*, dual cover, music, mat, disk mags, magazines. First rate condition. Sell below under guarantee. Phone Haines 0707 325359.

Commodore 64 computer, external music keyboard, sound expander, tape recorder, sound studio, disc case, discs, joystick, 100+ software, tape games, books, £150 only the lot. Will separate. Phone 021 444 0157.

Amstrad 6128 mono system. Over £150 original software, books including firmware, assembly, manuals, magazines, tape recorder, few tape games inc *GAC*, all games for £220. Phone 0977 792361 ask for extension 222.

Amstrad 6128, monitor, manual, over £150 of games, joystick, mags, offers welcome over £200. Phone Andy from 6 to 9 on 01-697 0936.

Spectrum 48K triple interface, Cheesth joystick, all leads & manuals, over £300 worth of games. All in top condition, £75 only. 01 337 7178 after 6pm.

Atari STFM, Silica starter pack, mouse and mags, including *Xenon*, *Guarantee* £12, *Platform*, *Star Wars*, *Ten Pin*, *Ward*, *UJAS*, all leads and manuals, excellent condition, still boxed £300. Tel: (0277) 630618.

128K Spectrum plus M face 128 (both still boxed), interface one, microphone, joystick, few tape games inc *GAC*, all leads included. Everything yep yep £160. No splitting. Phone Andrew (0423) 58827.

Amstrad CPC464 colour monitor, speech chip, TV tuner, music machine, light pen, 100 games (top 99%), joystick, mags, total worth £800. Sell for £295. Tel: Manston (0784) 220000.

Atari 520STFM excellent condition, Pro-sound worth £80 plus £400 of software including *Buggy Boy*, *Capitain*, *Out Run* and *Superman* £300, sell for £400 only. Phone Easton 38855.

Spectrum games - *Dragons* *Lair*, *Dandy*, *Hjack*, *Glaze*, *Arkward*, *Expanding* *Fist* and loads more. No more than £2. New datasets, 100+ software, 100+ mags, 100+ disks. Offers Tel: (0204) 43634.

Amstrad 464, colour monitor, Cheesth Mach 1 + joystick £700 software including *ATF*, *matchday 2*, *Cyberman*, *Thundercat*,

lots of Amstrad Action, Amix, C&VG Games and ACE magazines. Worth £1100+, sell £500. Telephone 011 908 8881.

Amstrad 520 STFM, over £200 worth of software including *Commer*, *Commer*, *Dungeon* Master, *Beyond* *King*, *Bards*, *Tale*, *UJAS*, *Captain* *Blond*, *Obs*, *Back* etc. All at £370 only. Phone Peter 02594 2259.

Commodore 64, dataset, unit, music expansion unit including 5 octave keyboard and music editor £250 the lot. Tel: 061 477 0778.

CBM64, C2N, joystick, lots of games including *Last Ninja*, *Wizball* etc. £150 only. Lots of other mags and software, £125 only. No reasonable offer refused. Tel: 01 349 1414.

CBM 64, datasets, over £200 of games including *Outrun*, *Last Ninja*, *Joystick*, *New Transformer*, *Rusted*, *Star Wars*, *Star Trek*, etc. No reasonable offer refused. Tel: 01 349 1414.

Amstrad colour 6128, multiface 2, Maxam, cassette deck, loads of books, mags, joystick and games. All in immaculate condition. Sell the lot for £300 only. Phone 01 888 4259.

Printer *DMF* 2000, excellent condition, hardly used plus Atari 26+ games machine with few joystick and disk games, £150 only. Sell with joystick, all £349, sell for £149. Ring Sharnk 01 767 8906.

Expert *Cartage* for sale, tape, telephone list to be sent. Bargain at £110+ P&P. Phone David Bradford 761763.

Spectrum 3 with Multiface Three, two joystick, tape recorder and leads, *Tasword* 3 wordprocessor, loads of disk software, still boxed, £1000. Price £300. Phone Raymond (0447) 712856.

Commodore 64 plus datasets over £200 worth of software plus joystick, will sell for £200 only. Tel: 01 247 3981 after 5pm.

Atari 520STFM, six months old. Over £400 worth of software including *Dungeons and Dragons*, *Star Trek*, *Commodore* 16 original titles, joystick, loads of mags £800 only. Ring Dave on 01-730 3267 after 5pm.

CBM 64, cassette recorder, over £200 worth of software including *Commer*, *Commer*, *Dungeon* Master, *Beyond* *King*, *Bards*, *Tale*, *UJAS*, *Captain* *Blond*, *Obs*, *Back* etc. All at £370 only. Phone Peter 02594 2259.

Amstrad 464, colour, over £400 of software including *Driller*, *Stargazer* etc. Amstrad Action, Amix, C&VG Games and ACE magazines. Worth £1100+, sell £500. Telephone 011 908 8881.

Sega system as new, *Konig* joystick, *Afterburner*, *Global Defender*, *Zillion*, worth over £300, sell for £150, will not go below £150. Tel: 01 388 8845, ask for Sacha after 5pm.

Commodore 64, C2N cassette recorder, 48K port, 40 original games, joystick for £30 or swap for Nintendo game. Phone (0302) 29662, David Walker, 21 Urban Road, Northcote, Doncaster, South Yorks.

Bargain Atari 520 STFM, software £175 software inc *Dungeon* Master, *Pawn*, *UJAS*, *Barbarian*, *Games*, *Bank* disk, disk, sell for £275. Tel: Shaun Newton to Willows 22356 after 6pm.

Amstrad Spectrum STFM £10, AMXAA AA £2, *Imager* £15, 12 PC disks £15, magazine £4.50, software £10. Phone 011 908 8881.

Atari 520STFM bought on the 5/28/88 with £100 of software. Sell for £200. Phone (01) 501 2082 ask for John.

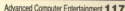
ZK Spectrum 3 for sale including joystick, blank disks, compilation disks, printer lead, and cassette lead. All boxed as new. Only £175 only. For further details ring 01 505 1514.

BBC system for sale. Very reasonable send SASSE for details to: ST Brown, 28 Broadstairs, Barton Mill, Hingham, Northumberland. NE47 4JN. Tel: 01638 720 317 after 4.30pm.

Commodore 64 datasets plus £500 of original software all still boxed. Quick sale best offer over £30. Interested phone Durham (0191) 3271716 ask for Simon after 6pm North.

Amstrad CPC128 colour computer, disk drive, multiface 2, 100+ software, 100+ mags, 100+ disks. All very good condition, still boxed. Bargain at £275 only. Tel: Windsor (0753) 862077 after 6pm.

Loads of cheap Spectrum software (all original). Most at a bit dated but still good bargains to be had! Tel: Amstrad (05827) 62139 after 6pm.



• **C64**, 2 datasets, joystick, News Mouse & Chess, £200 worth software (originals) Inc. Nubius, Freeparty, Leaderboards, maps, books, £100 on. Helpful if near Silverdale area, 44 Spring Drive, Broadwater, Stevenage, Herts. SG2 8AZ.

• **Commodore 64** with disc Epsom printer, joystick and various business oriented software, nearest offer to £300 secures. Cleverdon (0272) 67836.

• **Amstrad CPC464** colour monitor, games, lightpen, joystick, hand-held, games, magazines, Utilities, Laser Basic, Protext, Begonius, £1300, will sell for £350. Peter Mann, 11655, 11300, will sell for £350. Peter Mann, 11655, 11300, will sell for £350. Peter Mann, 11655, 11300, will sell for £350.

• **Saga console** Perfect condition £230 worth of games, plus extra joystick and light pen. Games, £375, Bargains 1 £200 on. Phone 01-854 5552 after 4pm, Ask for Daniel.

• **Commodore 64** computer, 1541 disc drive, printer, modem, joystick and games over 100 £300 on. Ring Silverdale (0438) 317968 after 5pm.

• **Sexational** offer Atari 520 STFM, £2500 worth of software plus Amstrad VCR 4600 VHS video recorder for £550 on. Phone (0936) 29950 (all hardware about a year old).

• **Amstrad CPC464**, colour monitor, joystick £1000+ worth of games, mags - £450 on. phone 080 560 355.

• **Yamaha CX3M**, MSX music computer, internal synthesiser with music keyboard and editing software. Boxed and vhs. Phone 0227 458285 (Canterbury) anytime. David £250 on.

• **Amstrad CPC464** - drive drive, 64K ram pack, music machine, lightpen, Multiface II, modular lightpen - over 50 disk games, Worth £600, sell for £300 on, will split. Ring Chris on 0707 58885 after 5pm.

• **Commodore 128** for sale, C2N, 2 joystick, over 100 titles, worth well over £200, all boxed, all guaranteed, excellent condition, all working, all for only £350. Call Darren on 0274 880183.

• **Bergaint** Spectrum, plus data recorder, all accessories, including tapes, manuals, manuals, many magazines and games. Ideal package for beginner at only £150 on. Ring Rob on Scarborough (0723) 378327.

• **Commodore 64**, £200 of games, disk drive, discassette, Frezzer Machine, games inc. Test Drive, Out Run, K+ just £410. Phone (0333) 76444 ask for Neil, not for split.

• **Electron** with Plus 3, rombox + data recorder, T273, Manager, 1 Tools, 1000s of software, PSUs, cables, loads of software, box of disks £275 the lot. Phone Jon (0225) 315689 after 7pm.

• **CPC6128** colour, monitor, joystick, disc covers, tape deck with lead, lots of games (tape disk) and over 25 magazines. £300. Phone Rianham (04527) 50917.

• **Atari 520STFM** 8 months old, excellent condition. Will over £500 worth of boxed games. Loads of data, joystick, mouse. Sell for £250 below on. Phone Richard 01-776 1212 after 6pm.

• **Amstrad 464** colour computer, 100 games, light pen, Graphic Adventure Creator, mags, joystick, worth £1200 reasonable offers only. Shaun Savory, 7 Oaklands, Swaffham, Norfolk, PE37 7EN. Phone (0760) 23343.

• **ST originals** £75, Xenon, Outrun, Bubble Bobble, Star Wars, Gold of Thrones, Artful Barbarian, Arkonoid, Crystal Castles, Puyo, Typhoon, Skyfox, Gauntlet, Road Runner £4 each. Phone Anthony on 09274 22559.

• **CBM64**, 1541 disc drive, MP8081 printer, MP-2 module for use with household TV, DMP2160 printer, Multiface 2 - games. Sell for £300 on. Contact Mark Rawson, 12 Victoria Street, Chichester, Lancs. Tel. (0202) 26693

• **Amstrad CPC464**, colour monitor, disk drive, Multiface II, joystick, speech synthesiser with speaker, disc covers, 300 games. Quick sale for £400 on. Tel. 0823 275615, all mint condition, buyer collects.

• **128K Spectrum** + 3, built in disc drive, adaptors, leads, joystick, software, magazines, 7 months guarantee £130, mouse, interface £20, over £130 extra software for £70. Phone Baldoock (0462) 993214.

• **Atari 2600**, simply plugs into TV, instant loading, suitable for B/W or colour TV's, joystick and 12 games included. Worth £140, will sell for £55. Contact (0411) 886 2863 after 6pm.

WANTED

• **Sorcery** by Infocom. Amiga, will pay up to £15. Contact John 54024 76738, Hemelhurst, Essex. Please call contact only.

• **Amiga A500** computer. Must be in working order and in good condition. Will swap for Spectrum 128+2 plus money or money alone. Quick sale wanted phone (0762) 336259.

• **IBM PC** contacts and software from all around the world. Write to: Oli Sals, Victoria 6, 00400 VHS, Flint, Flint.

• **ST contacts**, 1/2 or 1 meg, 1.00 preferred but not essential. Lots etc, or contact Alan, 65 Lime Grove, Dodinghurst, Essex, CM15 02X.

• **Swap Atari STFM**, excellent condition, still guaranteed, twenty latest titles, Gauntlet II etc for Amiga A500 with some software. Would consider swap plus cash, any offers? Phone Roger 01 789 3440.

PENPALS

• **Amiga owners** wanted now to DBC at 534 Umbro Road, Durham 4001, Rap of South Africa.

• **Atari ST** contacts wanted! Especially from overseas. Write to: Peter Corbridge, 10 Crickling Court, 32 Wilton Lane, Belgrave, Tamworth, Staffs, B77 2AA, England. All letters answered! H. Colin & Peggy.

• **ST** people wanted to swap all sorts. I am 17 and want everyone to write to me. Also inter-ested BBS, JP - 1 Chiltern Gardens, Brooklands Road, Sale, Manchester.

• **Australian ST** and Amiga owner seeks penpals from all over the world. For a good contact write to: Andrew Knap, Mason quill, SLD, Bendigo, 3551 Victoria, Australia.

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THE BLITTER END...

1992 AND ALL THAT

In four years time, as Alan Sugar continually reminds us, all the EEC's internal trade barriers will come crashing down. This is of vital importance to everyone reading this column, and not just because Uncle Alan will then be able to flog them a single-version EEC-PC. No, the really alarming thing is what the single market will do to your beloved computer magazines. Cue? Foreign imports not subject to ACE's stringent quality controls and HMG's jolly sensible veto on Barbarian ads? Quelle horreur! Donnerwetter!!

In a bid to stem the rising tide of public indi-



This is Abigail Darling, sister of Code Masters duo David and Richard Darling. Abigail works on the administration side of the business, so naturally enough she has to spend long periods of time wrapped in a towel with her head tipped back. Unfortunately, keeping her chin that high up does mean that her shower hat keeps falling off, as shown. Such are the pressures of business life.

ference, ACE newshound Andy Smith dashed across the Channel to see for himself the state of Eurocomputer magazines. What he brought back was pretty blood-curdling, we don't mind telling you – and that was just his expenses claim! The mags themselves were nothing short of terrifying!!

INCROYABLE!

The weirdest-but-one of the foreign mags had to be that bastion of French computer games journalism, *Tilt*. 'Torrides' proclaimed the cover; 'Les Softs Hard'. What could they be referring to? Why, a feature on micro porn games of course, complete with explicit screenshots (and amazingly enough even more explicit illustrations. The piece – entitled 'Lubrique A Brac' – concluded that the games were mostly sexist and naff, and that you'd do better to buy a porn mag if that's what you're after.

Most of the screenshots in the article were in colour and therefore quite impossible to, err... print here in Blitter End, but the American piece of Macintosh pornware *MacPlaymate* was very definitely mono. On closer inspection it also proved to be obscene to a quite improbable degree. Even a rather nicely drawn top-hat had a thoroughly explicit (English) expression scrawled across it, so that was out too. Zut!

VORSPRUNG DURCH TECHNIK

We thought *Tilt* was strong stuff until we opened a German Amiga magazine, but that one carried the astonishing prize clean away. In the middle of the magazine was a pull-out supplement that built, month-by-month, into a handy Motorola 68000 opcode reference. Are they all machine-code maniacs in Munich? Do they love Amiga assembler in Aachen? The mind boggles!

What message can we draw from this? That we Europeans can never escape our national

stereotypes, the French as sex maniacs, the Germans as techno-nerds and the British as carping xenophobes? No, at ACE we see it differently. We see it as a national challenge, to adapt to time for 1992 or die trying. That's why we're going to print a picture of a woman who's only wearing a bath-towel, right away. Tune in next month for our handy 'Build your own Transputer' reference card.

POOPS! RIDES AGAIN

Poor old Steve Turner must be a bit miffed. We're not sure, because we've not had the nerve to phone him after (a) missing his photo out of our *Who's Bad* feature last month, and (b) printing one of Andrew Braybrook instead. (Maybe Andrew Braybrook's miffed as well: who can say?)

The mistake was at least halfway understandable given that we were using a photo with both of the Graftgold programmers in it, and 'cropped' the wrong one out. The photo in question dates from last year's PCW show when Graftgold signed up with Telecomput. And has something of a jinx attached to it. Back in issue 7 we used it as a photo of Rainbird's Paul Hibbard – he was in the shot too – and very nearly printed the bit showing Steve Turner instead!

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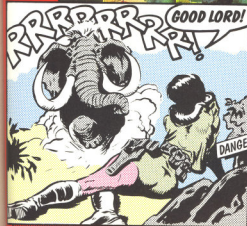
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